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Title 3—

The President

Executive Order 13961 of December 7, 2020

Governance and Integration of Federal Mission Resilience

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the National Security Act of 1947, as amended, I hereby order the following:

Section 1. *Policy.* It is the policy of the United States to maintain comprehensive and effective continuity programs that ensure national security and the preservation of government structure under the United States Constitution and in alignment with Presidential Policy Directive–40 (PPD–40) of July 15, 2016 (National Continuity Policy). Executive departments and agencies (agencies), including the Executive Office of the President, must maintain the capability and capacity to continuously perform National Essential Functions (NEFs), as defined by PPD–40, regardless of threat or condition, and with the understanding that adequate warning may not be available. Agency heads must fully integrate preparedness programs, including continuity and risk management, into day-to-day operations to ensure the preservation of the NEFs under all conditions.

Sec. 2. *Federal Mission Resilience Strategy.* To achieve this policy, in conjunction with this order, I am signing the Federal Mission Resilience Strategy (Strategy), which should be implemented to increase the resilience of the executive branch. Implementing the Strategy will reduce the current reliance on reactive relocation of personnel and enhance a proactive posture that minimizes disruption, distributes risk to the performance of NEFs, and maximizes the cost-effectiveness of actions that ensure continuity of operations, continuity of government, and enduring constitutional government.

Sec. 3. *Executive Committee.* (a) The Federal Mission Resilience Executive Committee (Executive Committee) is hereby established.

(b) The Executive Committee shall be composed of the Secretary of Defense, the Secretary of Homeland Security, the Director of National Intelligence, the Assistant to the President for National Security Affairs (APNSA), the Assistant to the President and Deputy Chief of Staff for Operations, and the Director of the Office of Management and Budget. When issues concerning science and technology, including communications technology, are on the agenda, the Executive Committee also shall include the Director of the Office of Science and Technology Policy (OSTP). The heads of other agencies, and other senior officials, shall be invited to attend meetings as appropriate.

(c) The APNSA, in coordination with the other members of the Executive Committee, shall be responsible for convening the committee, as appropriate, to coordinate the review, integration, and execution of the Strategy and other continuity policy across the executive branch.

(d) The Executive Committee shall:

(i) coordinate the development of an implementation plan (Plan) for the Strategy and other continuity policy, as described in section 4(b) of this order, and shall facilitate execution of the Plan and other continuity policy, as appropriate;

(ii) advise the President, through the Assistant to the President and Chief of Staff (Chief of Staff), on the review, integration, and execution of the Strategy and other continuity policy, including the recommendations outlined in section 4(c) of this order;

(iii) establish, with consensus of its members and as appropriate, subordinate coordinating bodies; and

(iv) coordinate the development of an interagency framework under which agencies will assess and address risk to Federal Mission Resilience and NEFs across the executive branch.

Sec. 4. *Implementation.* (a) Within 90 days of the date of this order, the Executive Committee shall submit a Federal Mission Resilience Executive Committee Charter to the President, through the Chief of Staff, that identifies any subordinate bodies, working groups, and reporting mechanisms that support the role of the Executive Committee.

(b) Within 90 days of the date of this order, the Executive Committee shall submit a Federal Mission Resilience Implementation Plan to the President, through the Chief of Staff, that sets forth how the executive branch will implement the Strategy. The Plan shall describe in detail the near-, mid-, and long-term actions necessary to ensure the uninterrupted performance of NEFs.

(c) Within 120 days of the date of this order, the Executive Committee shall coordinate the review of existing continuity policy and other related national policies, and shall provide recommendations to the President, through the Chief of Staff, on any actions necessary to align these policies with the implementation of the Strategy.

Sec. 5. *Amendment to PPD–40.* To designate a new National Continuity Coordinator (NCC), in section 6 of PPD–40, the second sentence is hereby revised to read as follows: ''To advise and assist the President in that function, the Assistant to the President for National Security Affairs, or his or her designee, is designated as the NCC.''

Sec. 6. *Amendments to Executive Order 13618.* (a) Section 2.3 of Executive Order 13618 of July 6, 2012 (Assignment of National Security and Emergency Preparedness Communications Functions), is hereby revised to read as follows:

''The Director of OSTP is delegated the authority to exercise the authorities vested in the President by section 706(a), and (c) through (e) of the Communications Act of 1934, as amended (47 U.S.C. 606(a), and (c) through (e)), if the President takes the actions, including issuing any necessary proclamations and findings, required by that section to invoke those authorities. This delegation shall apply to any provisions of any future public law that are the same or substantially the same as the provisions referenced in this section.''

(b) Section 3 of Executive Order 13618 is hereby revoked. The responsibilities of the national security and emergency preparedness Executive Committee set forth in section 3.3 of Executive Order 13618 shall be transferred to and exercised by the Executive Committee established in section 3 of this order.

Sec. 7. *Program Support.* The national security and emergency preparedness Executive Committee Joint Program Office established by section 4 of Executive Order 13618 shall support the Executive Committee established in section 3 of this order, the execution of activities described in section 4 of this order, and those activities taken by the Director of OSTP pursuant to section 6 of this order.

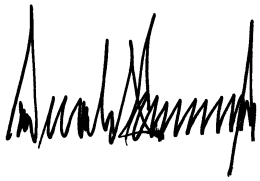
Sec. 8. *General Provisions.* (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order 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.



THE WHITE HOUSE,
December 7, 2020.

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DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

7 CFR Part 984

[Docket No. AMS–SC–20–0053; SC20–984–1 FR]

Walnuts Grown in California; Changes to Reporting Requirements

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Final rule.

SUMMARY: This rule revises the reporting requirements prescribed under the Federal marketing order regulating the handling of walnuts grown in California. This action requires California walnut handlers to report purchase commitments (walnuts sold but not yet shipped) with domestic and foreign buyers, monthly. This change provides more accurate information about supply and demand to the industry, which also enhances marketing efforts.

DATES: Effective January 11, 2021.

FOR FURTHER INFORMATION CONTACT: Terry Vawter, Regional Director, Marketing Order and Agreement Division, California Marketing Field Office, Specialty Crops Program, AMS, USDA; Telephone: (559) 487–5905, Fax: (559) 487–5906; or Email: *Terry.Vawter@usda.gov.*

Small businesses may request information on complying with this regulation by contacting Richard Lower, Marketing Order and Agreement Division, Specialty Crops Program, AMS, USDA, 1400 Independence Avenue SW, STOP 0237, Washington, DC 20250–0237; Telephone: (202) 720–2491, Fax: (202) 720–8938, or Email: *Richard.Lower@usda.gov.*

SUPPLEMENTARY INFORMATION: This final rule, pursuant to 5 U.S.C. 553, amends regulations issued to carry out a marketing order as defined in 7 CFR 900.2(j). This final rule is issued under Marketing Order No. 984, as amended (7 CFR part 984), regulating the handling of walnuts grown in California. Part 984 (referred to as the ''Order'') is effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601–674), hereinafter referred to as the ''Act.''

The California Walnut Board (hereinafter referred to as the ''Board'') locally administers the Order and is comprised of growers and handlers of walnuts operating within California, and a public member.

The Department of Agriculture (USDA) is issuing this final rule in conformance with Executive Orders 13563 and 13175. This action falls within a category of regulatory actions that the Office of Management and Budget (OMB) exempted from Executive Order 12866 review. Additionally, because this final rule does not meet the definition of a significant regulatory action, it does not trigger the requirements contained in Executive Order 13771. See OMB's Memorandum titled ''Interim Guidance Implementing Section 2 of the Executive Order of January 30, 2017, titled 'Reducing Regulation and Controlling Regulatory Costs' '' (February 2, 2017).

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. This final rule is not intended to have retroactive effect.

The Act provides that administrative proceedings must be exhausted before parties may file suit in court. Under section 608c(15)(A) of the Act, any handler subject to an order may file with USDA a petition stating that the order, any provision of the order, or any obligation imposed in connection with the order is not in accordance with law and request a modification of the order or to be exempted therefrom. A handler is afforded the opportunity for a hearing on the petition. After the hearing, USDA would rule on the petition. The Act provides that the district court of the United States in any district in which the handler is an inhabitant, or has his or her principal place of business, has jurisdiction to review USDA's ruling on the petition, provided an action is filed not later than 20 days after the date of the entry of the ruling.

This final rule revises reporting requirements under the Order by authorizing the Board to collect reports from handlers about monthly purchase commitments with domestic and foreign buyers. The Board believes that the collection of this information enables the industry to have more accurate and timely data regarding the industry's monthly supply and demand, and enhances overall marketing efforts.

The Marketing Order Revision Committee (MORC) met to discuss the proposal in a public meeting via teleconference on April 2, 2020. The MORC recommended the change in reporting requirements to enable the industry to have more complete information on purchase commitments. The Board unanimously recommended this action at a public meeting held on May 7, 2020, where stakeholders were encouraged to express their views and provide input.

Section 984.71 authorizes the Board to require handlers to report inventory of inshell and shelled walnuts as specified by the Board.

Section 984.72 authorizes the Board to require that handlers who handle merchantable walnuts, inshell or shelled, at any time during the marketing year shall submit reports showing the quantity handled and other pertinent information, as specified by the Board.

Section 984.73 authorizes the Board, with the approval of the Secretary, to require handlers to report walnut receipts from growers, handlers, or others on a form and at designated times.

Section 984.76 authorizes the Board, with the approval of the Secretary, to request handlers to furnish other reports and information as needed to enable the Board to perform its duties under the Order.

Sections 984.471, 984.472, and 984.473 provide the requirements related to reports of inventory, merchantable walnuts shipped, and walnuts received from growers, respectively.

Currently, reports of shipments and receipts are filed by handlers on CWB Form No. 6 no later than the 5th day of month following such shipments or receipts. This report also includes the quantity shipped to domestic and foreign buyers for shelled and inshell walnuts, including information about the quantity of walnuts exported by country of destination. Pursuant to this final rule, handlers would report purchase commitments of walnuts, not

yet shipped, made with domestic and foreign buyers. The change and information about each handler's shipments and receipts are expected to provide more timely information about supply and demand for walnuts, and enhance marketing and promotion efforts.

Section 984.472 is amended to add new paragraph (c), which requires handlers to submit reports on the purchase commitments with buyers that are not yet shipped. The title of Section 984.472 is also amended to read ''Reports of merchantable walnuts shipped, received, and committed.''

Final Regulatory Flexibility Analysis

Pursuant to requirements set forth in the Regulatory Flexibility Act (RFA), the Agricultural Marketing Service (AMS) has considered the economic impact of this action on small entities. Accordingly, AMS has prepared this final regulatory flexibility analysis.

The purpose of the RFA is to fit regulatory actions to the scale of businesses subject to such actions in order that small businesses will not be unduly or disproportionately burdened. Marketing orders issued pursuant to the Act, and rules issued thereunder, are unique in that they are brought about through group action of essentially small entities acting on their own behalf.

There are approximately 90 handlers subject to regulation under the Order and approximately 4,400 walnut growers in the production area. The Small Business Administration (SBA) defines small agricultural service firms as those having annual receipts of less than $30,000,000, and small agricultural producers as those having annual receipts of less than $1,000,000 (13 CFR 121.201).

According to the Board, there are approximately 4,400 producers and 90 handlers in the production area. The Board also reported that approximately 82 percent of California's walnut handlers shipped merchantable walnuts valued under $30 million during the 2018–2019 marketing year, and would, therefore, be considered small handlers according to the SBA definition.

Data from the 2017 Census of Agriculture, published by USDA's National Agricultural Statistics Service (NASS), show that 86 percent of California farms growing walnuts had walnut sales of less than $1 million. In an alternative computation using NASS data, the 3-year average crop value (2016/17 to 2018/19) was $1.24 billion. Average bearing acres over that same 3-year period were 333,000. Dividing crop value by acres yields a revenue per acre estimate of $3,733. Using these numbers, it would take approximately 268 acres ($1,000,000/$3,733) to yield $1 million in annual walnut sales. The 2017 Census of Agriculture Census data show that 80 percent of walnut farms in 2017 were below 260 acres. By either measure, the NASS data demonstrate that well over three-fourths of California walnut farms would be considered small businesses according to the SBA definition.

This final rule revises the title of section 984.472 and adds a new paragraph (c) to include the requirement for handlers to report monthly purchase commitments made with domestic and foreign buyers. This action provides more accurate and timely information regarding the industry's monthly supply and demand, and enhances overall marketing efforts.

During the MORC meeting on April 2, 2020, alternatives were discussed, including not collecting information about purchase commitments. However, the industry believes that information about walnut supply and demand is critical in supporting overall marketing efforts. Timely and accurate information gives the handlers and the Board valuable data, permitting them to focus on their sales efforts. At the May 7, 2020, meeting, the Board discussed the MORC's recommendation and its reasoning. There was agreement about the value of having the commitment information, along with information on shipments and receipts.

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the Order's information collection requirements have been previously approved by the Office of Management and Budget (OMB) under OMB No. 0581–0178, Vegetable and Specialty Crops. This final rule requires changes to the Board's existing CWB Form No. 6 by changing the title and adding the provision to collect information on purchase commitments with domestic and foreign buyers. The revised form has been submitted to OMB for approval.

As with all Federal marketing order programs, reports and forms are periodically reviewed to reduce information requirements and duplication by industry and public sector agencies. USDA has not identified any relevant Federal rules that duplicate, overlap, or conflict with this final rule.

AMS is committed to complying with the E-Government Act, to promote 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.

The Board's meetings were widely publicized throughout the walnut industry and all interested persons were invited to attend the meetings and encouraged to participate in the deliberations on all issues. The MORC's meeting on April 2, 2020, and the Board's meeting on May 7, 2020, were public meetings held via teleconference and all entities, both large and small, were encouraged to express their views on this issue.

A proposed rule concerning this action was published in the **Federal Register** on August 25, 2020, (85 FR 52278). Copies of the proposal were provided by the Board to members and handlers. Finally, the proposed rule was made available through the internet by USDA and the Office of the Federal Register. A 30-day comment period ending September 24, 2020, was provided to allow interested persons to respond to the proposal. Ten comments were received.

Seven of the comments favored adding the requirement for handlers to report purchase commitments, two of the commenters did not favor the change, and one commenter neither favored nor opposed the change.

Those favoring the change did so for similar reasons: The value in having accurate information about monthly inventories; the value in collecting the data and the importance of the data in relationship to the Board's marketing efforts; and the ability of the information to provide market trend data and an overall better picture of the market.

The two commenters who opposed the change did so because they were concerned about the reporting burden imposed on walnut handlers. One commenter also noted such commitment data could be impacted by cancelled orders or order adjustments. The other commented that the value of the information might not be offset by the increased reporting burden on walnut handlers.

The commenter who did not take a position for or against the changes to the Order discussed the potential for such reported information to be skewed by backorders, and urged AMS to consider an additional inventory category with a shipping time limit.

As to the two commenters who did not favor the change, it should be noted that some walnut handlers are also members of the Board, and this change to the reporting requirements was discussed in two separate public meetings a month apart. The vote on the change by the MORC on April 2, 2019,

and by the full Board on May 7, 2019, were unanimous. There were no opposing votes, and no handlers commented on the rule during the comment period. The handlers serving on the MORC and the Board did not feel that the additional information required by the change represented a significant burden to the reporting requirements. AMS believes that benefits of this change to the marketing of walnuts outweigh the concerns of the minimal increase in the reporting burden. Also, AMS finds the claim of commitment data being impacted by cancelled orders or order adjustments to be highly speculative, with no firm evidence presented to substantiate the assertion. Thus, there are no changes made to the final rule.

In addition, the comment about changes to the data created by potential backorders may not materialize, since handlers are free to make interhandler transfers of walnuts to meet their purchase commitments; and the nature of agricultural commodities, in general, is not conducive to the development of backorders. In agriculture, a crop is produced and harvested, and more is not coming until about a year later.

Accordingly, no changes will be made to the rule as proposed.

A small business guide on complying with fruit, vegetable, and specialty crop marketing agreements and orders may be viewed at: *https://www.ams.usda.gov/rules-regulations/moa/small-businesses.* Any questions about the compliance guide should be sent to Richard Lower at the previously mentioned address in the **FOR FURTHER INFORMATION CONTACT** section.

After consideration of all relevant material presented, including the information and recommendation submitted by the Board and other available information, it is hereby found that this rule will tend to effectuate the declared policy of the Act.

List of Subjects in 7 CFR Part 984

Marketing agreements, Reporting and recordkeeping requirements, Walnuts.

For the reasons set forth in the preamble, 7 CFR part 984 is amended as follows:

PART 984—WALNUTS GROWN IN CALIFORNIA

■ 1. The authority citation for 7 CFR part 984 continues to read as follows:

Authority: 7 U.S.C. 601–674.

■ 2. Amend § 984.472 by revising the section heading and adding paragraph (c) to read as follows:

§ 984.472 Reports of merchantable walnuts, received, shipped, and committed.

* * * * *

(c) Reports of merchantable walnuts on which handlers have made purchase commitments with buyers during the month, but which have not yet been shipped, shall be submitted to the Board on CWB Form No. 6, not later than the 5th day of the month following the month in which the walnuts were committed. Such reports shall show the quantity of walnuts committed in either inshell or shelled pounds. If the handler made no commitments during any month, he/she shall mark ''None'' in the ''Purchase Commitments'' section of CWB Form No. 6.

Bruce Summers,

Administrator, Agricultural Marketing Service.

[FR Doc. 2020–26880 Filed 12–9–20; 8:45 am]

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DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

12 CFR Part 34

[Docket No. OCC–2020–0039]

RIN 1557–AF04

FEDERAL RESERVE SYSTEM

12 CFR Part 226

[Docket No. R–1729]

RIN 7100–AG00

BUREAU OF CONSUMER FINANCIAL PROTECTION

12 CFR Part 1026

Appraisals for Higher-Priced Mortgage Loans Exemption Threshold

AGENCY: Office of the Comptroller of the Currency, Treasury (OCC), Board of Governors of the Federal Reserve System (Board); and Bureau of Consumer Financial Protection (Bureau).

ACTION: Final rules, official interpretations and commentary.

SUMMARY: The OCC, the Board, and the Bureau are finalizing amendments to the official interpretations for their regulations that implement section 129H of the Truth in Lending Act (TILA). Section 129H of TILA establishes special appraisal requirements for ''higher-risk mortgages,'' termed ''higher-priced mortgage loans'' or ''HPMLs'' in the agencies' regulations. The OCC, the Board, the Bureau, the Federal Deposit Insurance Corporation (FDIC), the National Credit Union Administration (NCUA), and the Federal Housing Finance Agency (FHFA) (collectively, the Agencies) jointly issued final rules implementing these requirements, effective January 18, 2014. The Agencies' rules exempted, among other loan types, transactions of $25,000 or less, and required that this loan amount be adjusted annually based on any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W). If there is no annual percentage increase in the CPI–W, the OCC, the Board, and the Bureau will not adjust this exemption threshold from the prior year. However, in years following a year in which the exemption threshold was not adjusted, the threshold is calculated by applying the annual percentage increase in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. Based on the CPI–W in effect as of June 1, 2020, the exemption threshold will remain at $27,200, effective January 1, 2021.

DATES: This final rule is effective January 1, 2021.

FOR FURTHER INFORMATION CONTACT: *OCC:* MaryAnn Nash, Counsel, Chief Counsel's Office, (202) 649–6287; for persons who are deaf or hard of hearing TTY, (202) 649–5597.

Board: Lorna M. Neill, Senior Counsel, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, at (202) 452–3667; for users of Telecommunications Device for the Deaf (TDD) only, contact (202) 263–4869.

Bureau: Rachel Ross, Attorney-Advisor, Office of Regulations, Bureau of Consumer Financial Protection, at (202) 435–7700. If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) amended the Truth in Lending Act (TILA) to add special appraisal requirements for ''higher-risk mortgages.'' [1] In January 2013, the Agencies jointly issued a final rule implementing these requirements and adopted the term ''higher-priced

[1] Public Law 111–203, section 1471, 124 Stat. 1376, 2185–87 (2010), codified at TILA section 129H, 15 U.S.C. 1639h.

mortgage loan'' (HPML) instead of ''higher-risk mortgage'' (the January 2013 Final Rule).[2] In July 2013, the Agencies proposed additional exemptions from the January 2013 Final Rule (the 2013 Supplemental Proposed Rule).[3] In December 2013, the Agencies issued a supplemental final rule with additional exemptions from the January 2013 Final Rule (the December 2013 Supplemental Final Rule).[4] Among other exemptions, the Agencies adopted an exemption from the new HPML appraisal rules for transactions of $25,000 or less, to be adjusted annually for inflation.

The OCC's, the Board's, and the Bureau's versions of the January 2013 Final Rule and December 2013 Supplemental Final Rule and corresponding official interpretations are substantively identical. The FDIC, NCUA, and FHFA adopted the Bureau's version of the regulations under the January 2013 Final Rule and December 2013 Supplemental Final Rule.[5]

The OCC's, Board's, and Bureau's regulations,[6] and their accompanying interpretations,[7] provide that the exemption threshold for smaller loans will be adjusted effective January 1 of each year based on any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900. If there is no annual percentage increase in the CPI–W, the OCC, the Board, and the Bureau will not adjust the threshold amounts from the prior year.[8]

On November 30, 2016, the OCC, the Board, and the Bureau published a final rule in the **Federal Register** to memorialize the calculation method used by the agencies each year to adjust the exemption threshold to ensure that the values for the exemption threshold keep pace with the CPI–W (HPML Small Dollar Adjustment Calculation Rule).[9] The HPML Small Dollar Adjustment Calculation Rule memorialized the policy that, if there is no annual percentage increase in the CPI–W, the OCC, the Board, and Bureau will not adjust the exemption threshold from the prior year. The HPML Small Dollar Adjustment Calculation Rule also provided that, in years following a year in which the exemption threshold was not adjusted because there was a decrease in the CPI–W from the previous year, the threshold is calculated by applying the annual percentage change in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly; if the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted, after rounding.

II. 2021 Adjustment and Commentary Revision

Effective January 1, 2021, the exemption threshold amount remains at $27,200. This amount is based on the CPI–W in effect on June 1, 2020, which was reported on May 12, 2020. The Bureau of Labor Statistics publishes consumer-based indices monthly but does not report a CPI change on June 1; indices are reported in the middle of the prior month. The CPI–W is a subset of the CPI–U index (based on all urban consumers) and represents approximately 29 percent of the U.S. population. The CPI–W reported on May 12, 2020, reflects a 0.1 percent increase in the CPI–W from April 2019 to April 2020. Accordingly, the 0.1 percent increase in the CPI–W from April 2019 to April 2020 results in an exemption threshold amount of $27,200, after rounding. The OCC, the Board, and the Bureau are revising the commentaries to their respective regulations to add new comments as follows:

- Comment 203(b)(2)–3.viii to 12 CFR part 34, Appendix C to Subpart G (OCC);
- Comment 43(b)(2)–3.viii to Supplement I of 12 CFR part 226 (Board); and
- Comment 35(c)(2)(ii)–3.viii to Supplement I of 12 CFR part 1026 (Bureau).

These new comments state that, from January 1, 2021, through December 31, 2021, the threshold amount is $27,200. These revisions are effective January 1, 2021.

III. Regulatory Analysis

Administrative Procedure Act

Under the Administrative Procedure Act, notice and opportunity for public comment are not required if the agency finds that notice and public comment are impracticable, unnecessary, or contrary to the public interest.[10] The amendments in this rule are technical and apply the method previously memorialized in the December 2013 Supplemental Final Rule and the HPML Small Dollar Adjustment Calculation Rule. For these reasons, the OCC, the Board, and the Bureau have determined that publishing a notice of proposed rulemaking and providing opportunity for public comment are unnecessary. Therefore, the amendments are adopted in final form.

Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) does not apply to a rulemaking where a general notice of proposed rulemaking is not required.[11] As noted previously, the agencies have determined that it is unnecessary to publish a general notice of proposed rulemaking for this final rule. Accordingly, the RFA's requirements relating to an initial and final regulatory flexibility analysis do not apply.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995,[12] the agencies reviewed this final rule. No collections of information pursuant to the Paperwork Reduction Act are contained in the final rule.

Unfunded Mandates Reform Act

The OCC analyzes proposed rules for the factors listed in Section 202 of the Unfunded Mandates Reform Act of 1995, before promulgating a final rule

[2] 78 FR 10368 (Feb. 13, 2013).

[3] 78 FR 48548 (Aug. 8, 2013).

[4] 78 FR 78520 (Dec. 26, 2013).

[5] *See* NCUA: 12 CFR 722.3; FHFA: 12 CFR part 1222. Although the FDIC adopted the Bureau's version of the regulation, the FDIC did not issue its own regulation containing a cross-reference to the Bureau's version. *See* 78 FR 10368, 10370 (Feb. 13, 2013).

[6] 12 CFR 34.203(b)(2) (OCC); 12 CFR 226.43(b)(2) (Board); and 12 CFR 1026.35(c)(2)(ii) (Bureau).

[7] 12 CFR part 34, appendix C to Subpart G, comment 203(b)(2)–1 (OCC); 12 CFR part 226, Supplement I, comment 43(b)(2)–1 (Board); and 12 CFR part 1026, Supplement I, comment 35(c)(2)(ii)–1 (Bureau).

[8] *See* 12 CFR part 34, appendix C to Subpart G, comment 203(b)(2)–1 and –2 (OCC); 12 CFR part 226, Supplement I, comment 43(b)(2)–1 and –2 (Board); and 12 CFR part 1026, Supplement I, comment 35(c)(2)(ii)–1 and –2 (Bureau).

[9] *See* 81 FR 86250 (Nov. 30, 2016).

[10] 5 U.S.C. 553(b)(B).

[11] 5 U.S.C. 603(a), 604(a).

[12] 44 U.S.C. 3506; 5 CFR part 1320.

for which a general notice of proposed rulemaking was published.[13] As discussed above, the OCC has determined that the publication of a general notice of proposed rulemaking is unnecessary.

Bureau Congressional Review Act Statement

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Bureau will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to the rule taking effect. The Office of Information and Regulatory Affairs (OIRA) has designated this rule as not a ''major rule'' as defined by 5 U.S.C. 804(2).

Bureau Signing Authority

The Acting Associate Director for Research, Markets and Regulations, Dan S. Sokolov, having reviewed and approved this document, is delegating the authority to electronically sign this document to Laura Galban, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

List of Subjects

12 CFR Part 34

Appraisal, Appraiser, Banks, Banking, Consumer protection, Credit, Mortgages, National banks, Reporting and recordkeeping requirements, Savings associations, Truth in lending.

12 CFR Part 226

Advertising, Appraisal, Appraiser, Consumer protection, Credit, Federal Reserve System, Reporting and recordkeeping requirements, Truth in lending.

12 CFR Part 1026

Advertising, Banking, Banks, Consumer protection, Credit, Credit unions, Mortgages, National banks, Reporting and recordkeeping requirements, Savings associations, Truth in lending.

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Authority and Issuance

For the reasons set forth in the preamble, the OCC amends 12 CFR part 34 as set forth below:

[13] 2 U.S.C. 1532.

PART 34—REAL ESTATE LENDING AND APPRAISALS

■ 1. The authority citation for part 34 continues to read as follows:

Authority: 12 U.S.C. 1 *et seq.,* 25b, 29, 93a, 371, 1462a, 1463, 1464, 1465, 1701j–3, 1828(o), 3331 *et seq.,* 5101 *et seq.,* 5412(b)(2)(B) and 15 U.S.C. 1639h.

■ 2. In Appendix C to Subpart G, under *Section 34.203—Appraisals for Higher-Priced Mortgage Loans,* paragraph 34.203(b)(2) is revised to read as follows:

Appendix C to Subpart G—OCC Interpretations

* * * * *

Section 34.203—Appraisals for Higher-Priced Mortgage Loans

* * * * *

Paragraph 34.203(b)(2)

1. *Threshold amount.* For purposes of § 34.203(b)(2), the threshold amount in effect during a particular period is the amount stated in comment 203(b)(2)–3 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 203(b)(2)–3 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.

2. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

3. *Threshold.* For purposes of § 34.203(b)(2), the threshold amount in effect during a particular period is the amount stated below for that period.

i. From January 18, 2014, through December 31, 2014, the threshold amount is $25,000.

ii. From January 1, 2015, through December 31, 2015, the threshold amount is $25,500.

iii. From January 1, 2016, through December 31, 2016, the threshold amount is $25,500.

iv. From January 1, 2017, through December 31, 2017, the threshold amount is $25,500.

v. From January 1, 2018, through December 31, 2018, the threshold amount is $26,000.

vi. From January 1, 2019, through December 31, 2019, the threshold amount is $26,700.

vii. From January 1, 2020, through December 31, 2020, the threshold amount is $27,200.

viii. From January 1, 2021, through December 31, 2021, the threshold amount is $27,200.

4. *Qualifying for exemption—in general.* A transaction is exempt under § 34.203(b)(2) if the creditor makes an extension of credit at consummation that is equal to or below the threshold amount in effect at the time of consummation.

5. *Qualifying for exemption—subsequent changes.* A transaction does not meet the condition for an exemption under § 34.203(b)(2) merely because it is used to satisfy and replace an existing exempt loan, unless the amount of the new extension of credit is equal to or less than the applicable threshold amount. For example, assume a closed-end loan that qualified for a § 34.203(b)(2) exemption at consummation in year one is refinanced in year ten and that the new loan amount is greater than the threshold amount in effect in year ten. In these circumstances, the creditor must comply with all of the applicable requirements of § 34.203 with respect to the year ten transaction if the original loan is satisfied and replaced by the new loan, unless another exemption from the requirements of § 34.203 applies. *See* § 34.203(b) and (d)(7).

* * * * *

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Authority and Issuance

For the reasons set forth in the preamble, the Board amends Regulation Z, 12 CFR part 226, as set forth below:

PART 226—TRUTH IN LENDING (REGULATION Z)

■ 3. The authority citation for part 226 continues to read as follows:

Authority: 12 U.S.C. 3806; 15 U.S.C. 1604, 1637(c)(5), 1639(l), and 1639h; Pub. L. 111–24, section 2, 123 Stat. 1734; Pub. L. 111–203, 124 Stat. 1376.

■ 4. In Supplement I to part 226, under *Section 226.43—Appraisals for Higher-*

Risk Mortgage Loans, paragraph 43(b)(2) is revised to read as follows:

Supplement I to Part 226—Official Staff Interpretations

* * * * *

Section 226.43—Appraisals for Higher—Risk Mortgage Loans

* * * * *

Paragraph 43(b)(2)

1. *Threshold amount.* For purposes of § 226.43(b)(2), the threshold amount in effect during a particular period is the amount stated in comment 43(b)(2)–3 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 43(b)(2)–3 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.

2. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

3. *Threshold.* For purposes of § 226.43(b)(2), the threshold amount in effect during a particular period is the amount stated below for that period.

i. From January 18, 2014, through December 31, 2014, the threshold amount is $25,000.

ii. From January 1, 2015, through December 31, 2015, the threshold amount is $25,500.

iii. From January 1, 2016, through December 31, 2016, the threshold amount is $25,500.

iv. From January 1, 2017, through December 31, 2017, the threshold amount is $25,500.

v. From January 1, 2018, through December 31, 2018, the threshold amount is $26,000.

vi. From January 1, 2019, through December 31, 2019, the threshold amount is $26,700.

vii. From January 1, 2020, through December 31, 2020, the threshold amount is $27,200.

viii. From January 1, 2021, through December 31, 2021, the threshold amount is $27,200.

4. *Qualifying for exemption—in general.* A transaction is exempt under § 226.43(b)(2) if the creditor makes an extension of credit at consummation that is equal to or below the threshold amount in effect at the time of consummation.

5. *Qualifying for exemption—subsequent changes.* A transaction does not meet the condition for an exemption under § 226.43(b)(2) merely because it is used to satisfy and replace an existing exempt loan, unless the amount of the new extension of credit is equal to or less than the applicable threshold amount. For example, assume a closed-end loan that qualified for a § 226.43(b)(2) exemption at consummation in year one is refinanced in year ten and that the new loan amount is greater than the threshold amount in effect in year ten. In these circumstances, the creditor must comply with all of the applicable requirements of § 226.43 with respect to the year ten transaction if the original loan is satisfied and replaced by the new loan, unless another exemption from the requirements of § 226.43 applies. *See* § 226.43(b) and (d)(7).

* * * * *

BUREAU OF CONSUMER FINANCIAL PROTECTION

Authority and Issuance

For the reasons set forth in the preamble, the Bureau amends Regulation Z, 12 CFR part 1026, as set forth below:

PART 1026—TRUTH IN LENDING (REGULATION Z)

■ 5. The authority citation for part 1026 continues to read as follows:

Authority: 12 U.S.C. 2601, 2603–2605, 2607, 2609, 2617, 3353, 5511, 5512, 5532, 5581; 15 U.S.C. 1601 *et seq.*

■ 6. In Supplement I to part 1026, under *Section 1026.35—Requirements for Higher-Priced Mortgage Loans,* paragraph 35(c)(2)(ii) is revised to read as follows:

Supplement I to Part 1026—Official Interpretations

* * * * *

Section 1026.35—Requirements for Higher-Priced Mortgage Loans

* * * * *

Paragraph 35(c)(2)(ii)

1. *Threshold amount.* For purposes of § 1026.35(c)(2)(ii), the threshold amount in effect during a particular period is the amount stated in comment 35(c)(2)(ii)–3 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 35(c)(2)(ii)–3 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.

2. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

3. *Threshold.* For purposes of § 1026.35(c)(2)(ii), the threshold amount in effect during a particular period is the amount stated below for that period.

i. From January 18, 2014, through December 31, 2014, the threshold amount is $25,000.

ii. From January 1, 2015, through December 31, 2015, the threshold amount is $25,500.

iii. From January 1, 2016, through December 31, 2016, the threshold amount is $25,500.

iv. From January 1, 2017, through December 31, 2017, the threshold amount is $25,500.

v. From January 1, 2018, through December 31, 2018, the threshold amount is $26,000.

vi. From January 1, 2019, through December 31, 2019, the threshold amount is $26,700.

vii. From January 1, 2020, through December 31, 2020, the threshold amount is $27,200.

viii. From January 1, 2021, through December 31, 2021, the threshold amount is $27,200.

4. *Qualifying for exemption—in general.* A transaction is exempt under

§ 1026.35(c)(2)(ii) if the creditor makes an extension of credit at consummation that is equal to or below the threshold amount in effect at the time of consummation.

5. *Qualifying for exemption—subsequent changes.* A transaction does not meet the condition for an exemption under § 1026.35(c)(2)(ii) merely because it is used to satisfy and replace an existing exempt loan, unless the amount of the new extension of credit is equal to or less than the applicable threshold amount. For example, assume a closed-end loan that qualified for a § 1026.35(c)(2)(ii) exemption at consummation in year one is refinanced in year ten and that the new loan amount is greater than the threshold amount in effect in year ten. In these circumstances, the creditor must comply with all of the applicable requirements of § 1026.35(c) with respect to the year ten transaction if the original loan is satisfied and replaced by the new loan, unless another exemption from the requirements of § 1026.35(c) applies. *See* § 1026.35(c)(2) and (c)(4)(vii).

* * * * *

Brian P. Brooks

Acting Comptroller of the Currency.

By order of the Board of Governors of the Federal Reserve System, acting through the Secretary of the Board under delegated authority.

Ann Misback,

Secretary of the Board.

Laura Galban

Federal Register Liaison, Bureau of Consumer Financial Protection.

[FR Doc. 2020–25872 Filed 12–9–20; 8:45 am]

BILLING CODE 6210–01–P 4810–33–P; 4810–AM–P

FEDERAL RESERVE SYSTEM

12 CFR Part 209

[Regulation I; Docket No. R–1732]

RIN 7100–AG 02

Federal Reserve Bank Capital Stock

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Final rule.

SUMMARY: The Board of Governors (Board) is publishing a final rule that applies an inflation adjustment to the threshold for total consolidated assets in Regulation I. Federal Reserve Bank (Reserve Bank) stockholders that have total consolidated assets above the threshold receive a different dividend rate on their Reserve Bank stock than stockholders with total consolidated assets at or below the threshold. The Federal Reserve Act requires that the Board annually adjust the total consolidated asset threshold to reflect the change in the Gross Domestic Product Price Index, published by the Bureau of Economic Analysis (BEA). Based on the change in the Gross Domestic Product Price Index as of September 30, 2020, the total consolidated asset threshold will be $10,785,000,000 through December 31, 2021.

DATES: This final rule is effective January 11, 2021.

FOR FURTHER INFORMATION CONTACT: Evan Winerman, Senior Counsel (202–872–7578), Legal Division; or Michael Long, Senior Financial Institutions Policy Analyst (202–452–2262), Reserve Bank Operations and Payments Systems Division. For users of Telecommunications Device for the Deaf (TDD) only, contact (202) 263–4869.

SUPPLEMENTARY INFORMATION:

I. Background

Regulation I governs the issuance and cancellation of capital stock by the Reserve Banks. Under section 5 of the Federal Reserve Act [1] and Regulation I,[2] a member bank must subscribe to capital stock of the Reserve Bank of its district in an amount equal to six percent of the member bank's capital and surplus. The member bank must pay for one-half of this subscription on the date that the Reserve Bank approves its application for capital stock, while the remaining half of the subscription shall be subject to call by the Board.[3]

Section 7(a)(1) of the Federal Reserve Act [4] provides that Reserve Bank stockholders with $10 billion or less in total consolidated assets shall receive a six percent dividend on paid-in capital stock, while stockholders with more than $10 billion in total consolidated assets shall receive a dividend on paid-in capital stock equal to the *lesser* of six percent and ''the rate equal to the high yield of the 10-year Treasury note auctioned at the last auction held prior to the payment of such dividend.'' Section 7(a)(1) requires that the Board adjust the threshold for total consolidated assets annually to reflect the change in the Gross Domestic Product Price Index, published by the BEA.

Regulation I implements section 7(a)(1) of the Federal Reserve Act by (1) defining the term ''total consolidated assets,'' [5] (2) incorporating the statutory dividend rates for Reserve Bank stockholders [6] and (3) providing that the Board shall adjust the threshold for total consolidated assets annually to reflect the change in the Gross Domestic Product Price Index.[7] The Board has explained that it ''expects to make this adjustment [to the threshold for total consolidated assets] using the final second quarter estimate of the Gross Domestic Product Price Index for each year, published by the Bureau of Economic Analysis.'' [8]

II. Adjustment

The Board annually adjusts the $10 billion total consolidated asset threshold based on the change in the Gross Domestic Product Price Index between the second quarter of 2015 (the baseline year) and the second quarter of the current year.[9] The second quarter 2020 Gross Domestic Product Price Index estimate published by the BEA in September 2020 (112.860) is 7.85 percent higher than the second quarter 2015 Gross Domestic Product Price Index estimate published by the BEA in September 2020 (104.647). Based on this change in the Gross Domestic Product Price Index, the threshold for total consolidated assets in Regulation I will be $10,785,000,000 as of January 11, 2021.

III. Administrative Law Matters

Administrative Procedure Act

The provisions of 5 U.S.C. 553(b) relating to notice of proposed rulemaking have not been followed in connection with the adoption of these amendments. The amendments involve expected, ministerial adjustments that are required by statute and Regulation I and are consistent with a method previously set forth by the Board.[10] Accordingly, the Board finds good cause for determining, and so determines, that notice in accordance with 5 U.S.C. 553(b) is unnecessary.

[1] 12 U.S.C. 287.

[2] 12 CFR 209.4(a).

[3] 12 U.S.C. 287 and 12 CFR 209.4(c)(2).

[4] 12 U.S.C. 289(a)(1).

[5] 12 CFR 209.1(d)(3) (''Total consolidated assets means the total assets on the stockholder's balance sheet as reported by the stockholder on its Consolidated Report of Condition and Income (Call Report) as of the most recent December 31, except in the case of a new member or the surviving stockholder after a merger 'total consolidated assets' means (until the next December 31 Call Report becomes available) the total consolidated assets of the new member or the surviving stockholder at the time of its application for capital stock'').

[6] 12 CFR 209.4(e), (c)(1)(ii), and (d)(1)(ii); 209.2(a); and 209.3(d)(3).

[7] 12 CFR 209.4(f).

[8] 81 FR 84415, 84417 (Nov. 23, 2016).

[9] The BEA makes ongoing revisions to its estimates of the Gross Domestic Product Price Index for historical calendar quarters. The Board calculates annual adjustments from the baseline year (rather than from the prior-year total consolidated asset threshold) to ensure that the adjusted total consolidated asset threshold accurately reflects the cumulative change in the BEA's most recent estimates of the Gross Domestic Product Price Index.

[10] *See* 12 CFR 209.4(f) and n. 8 and accompanying text, *supra.*

Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) does not apply to a rulemaking where a general notice of proposed rulemaking is not required.[11] As noted previously, the Board has determined that it is unnecessary to publish a general notice of proposed rulemaking for this final rule. Accordingly, the RFA's requirements relating to an initial and final regulatory flexibility analysis do not apply.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995,[12] the Board has reviewed this final rule. No collections of information pursuant to the Paperwork Reduction Act are contained in the final rule.

List of Subjects in 12 CFR Part 209

Banks and banking, Federal Reserve System, Reporting and recordkeeping requirements, Securities.

Authority and Issuance

For the reasons set forth in the preamble, the Board amends Regulation I, 12 CFR part 209, as follows:

PART 209—ISSUE AND CANCELLATION OF FEDERAL RESERVE BANK CAPITAL STOCK (REGULATION I)

■ 1. The authority citation for part 209 continues to read as follows:

Authority: 12 U.S.C. 222, 248, 282, 286–288, 289, 321, 323, 327–328, and 466.

■ 2. In part 209, remove all references to ''$10,715,000,000'' and add in their place ''$10,785,000,000'', wherever they appear.

By order of the Board of Governors of the Federal Reserve System under delegated authority.

Ann Misback,

Secretary of the Board.

[FR Doc. 2020–26199 Filed 12–9–20; 8:45 am]

BILLING CODE P

[11] 5 U.S.C. 603 and 604.

[12] 44 U.S.C. 3506; 5 CFR 1320.

FEDERAL RESERVE SYSTEM

12 CFR Part 213

[Docket No. R–1727]

RIN 7100–AF98

BUREAU OF CONSUMER FINANCIAL PROTECTION

12 CFR Part 1013

Consumer Leasing (Regulation M)

AGENCY: Board of Governors of the Federal Reserve System (Board); and Bureau of Consumer Financial Protection (Bureau).

ACTION: Final rules, official interpretations and commentary.

SUMMARY: The Board and the Bureau are finalizing amendments to the official interpretations and commentary for the agencies' regulations that implement the Consumer Leasing Act (CLA). The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) amended the CLA by requiring that the dollar threshold for exempt consumer leases be adjusted annually by the annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W). If there is no annual percentage increase in the CPI–W, the Board and the Bureau will not adjust this exemption threshold from the prior year. However, in years following a year in which the exemption threshold was not adjusted, the threshold is calculated by applying the annual percentage change in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. Based on the annual percentage increase in the CPI–W as of June 1, 2020, the exemption threshold will remain at $58,300 effective January 1, 2021.

Because the Dodd-Frank Act also requires similar adjustments in the Truth in Lending Act's threshold for exempt consumer credit transactions, the Board and the Bureau are making similar amendments to each of their respective regulations implementing the Truth in Lending Act elsewhere in this issue of the **Federal Register**.

DATES: This final rule is effective January 1, 2021.

FOR FURTHER INFORMATION CONTACT: *Board:* Vivian W. Wong, Senior Counsel, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, at (202) 452–3667; for users of Telecommunications Device for the Deaf (TDD) only, contact (202) 263–4869.

Bureau: Rachel Ross, Attorney-Advisor, Office of Regulations, Bureau of Consumer Financial Protection, at (202) 435–7700. If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) increased the threshold in the Consumer Leasing Act (CLA) for exempt consumer leases, and the threshold in the Truth in Lending Act (TILA) for exempt consumer credit transactions,[1] from $25,000 to $50,000, effective July 21, 2011.[2] In addition, the Dodd-Frank Act requires that, on and after December 31, 2011, these thresholds be adjusted annually for inflation by the annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W), as published by the Bureau of Labor Statistics. In April 2011, the Board issued a final rule amending Regulation M (which implements the CLA) consistent with these provisions of the Dodd-Frank Act, along with a similar final rule amending Regulation Z (which implements TILA) (collectively, the Board Final Threshold Rules).[3]

Title X of the Dodd-Frank Act transferred rulemaking authority for a number of consumer financial protection laws from the Board to the Bureau, effective July 21, 2011. In connection with this transfer of rulemaking authority, the Bureau issued its own Regulation M implementing the CLA, 12 CFR part 1013, substantially duplicating the Board's Regulation M.[4] Although the Bureau has the authority to issue rules to implement the CLA for most entities, the Board retains authority to issue rules under the CLA for certain motor vehicle dealers covered by section 1029(a) of the Dodd-Frank Act, and the Board's Regulation M continues to apply to those entities.[5]

[1] Although consumer credit transactions above the threshold are generally exempt, loans secured by real property or by personal property used or expected to be used as the principal dwelling of a consumer and private education loans are covered by TILA regardless of the loan amount. *See* 12 CFR 226.3(b)(1)(i) (Board) and 12 CFR 1026.3(b)(1)(i) (Bureau).

[2] Public Law 111–203, section 1100E, 124 Stat. 1376, 2111 (2010).

[3] 76 FR 18349 (Apr. 4, 2011); 76 FR 18354 (Apr. 4, 2011).

[4] *See* 76 FR 78500 (Dec. 19, 2011); 81 FR 25323 (Apr. 28, 2016).

[5] Section 1029(a) of the Dodd-Frank Act states: ''Except as permitted in subsection (b), the Bureau may not exercise any rulemaking, supervisory,

The Board's and the Bureau's regulations,[6] and their accompanying commentaries, provide that the exemption threshold will be adjusted annually effective January 1 of each year based on any annual percentage increase in the CPI–W that was in effect on the preceding June 1. They further provide that any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.[7] Since 2011, the Board and the Bureau have adjusted the Regulation M exemption threshold annually, in accordance with these rules.

On November 30, 2016, the Board and the Bureau published a final rule in the **Federal Register** to memorialize the calculation method used by the agencies each year to adjust the exemption threshold to ensure that, as contemplated by section 1100E(b) of the Dodd-Frank Act, the values for the exemption threshold keep pace with the CPI–W (Regulation M Adjustment Calculation Rule).[8] The Regulation M Adjustment Calculation Rule memorialized the policy that, if there is no annual percentage increase in the CPI–W, the Board and Bureau will not adjust the exemption threshold from the prior year. The Regulation M Adjustment Calculation Rule also provided that, in years following a year in which the exemption threshold was not adjusted because there was a decrease in the CPI–W from the previous year, the threshold is calculated by applying the annual percentage change in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly; if the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted, after rounding.

II. 2021 Adjustment and Commentary Revision

Effective January 1, 2021, the exemption threshold amount remains at $58,300. This amount is based on the CPI–W in effect on June 1, 2020, which was reported on May 12, 2020. The Bureau of Labor Statistics publishes consumer-based indices monthly, but does not report a CPI change on June 1; indices are reported in the middle of the prior month. The CPI–W is a subset of the CPI–U index (based on all urban consumers) and represents approximately 29 percent of the U.S. population. The CPI–W reported on May 12, 2020 reflects a 0.1 percent increase in the CPI–W from April 2019 to April 2020. Accordingly, the 0.1 percent increase in the CPI–W from April 2019 to April 2020 results in an exemption threshold amount of $58,300, after rounding. The Board and the Bureau are revising the commentaries to their respective regulations to add new comment 2(e)–11.xii to state that, from January 1, 2021 through December 31, 2021, the threshold amount is $58,300. These revisions are effective January 1, 2021.[9]

III. Regulatory Analysis

Administrative Procedure Act

Under the Administrative Procedure Act, notice and opportunity for public comment are not required if the Board and the Bureau find that notice and public comment are impracticable, unnecessary, or contrary to the public interest.[10] The amendments in this rule are technical and apply the method previously set forth in the Board Final Threshold Rules and the Regulation M Adjustment Calculation Rule. For these reasons, the Board and the Bureau have determined that publishing a notice of proposed rulemaking and providing opportunity for public comment are unnecessary. Therefore, the amendments are adopted in final form.

Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) does not apply to a rulemaking where a general notice of proposed rulemaking is not required.[11] As noted previously, the agencies have determined that it is unnecessary to publish a general notice of proposed rulemaking for this joint final rule. Accordingly, the RFA's requirements relating to an initial and final regulatory flexibility analysis do not apply.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995,[12] the agencies reviewed this final rule. No collections of information pursuant to the Paperwork Reduction Act are contained in the final rule.

Bureau Congressional Review Act Statement

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Bureau will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to the rule taking effect. The Office of Information and Regulatory Affairs (OIRA) has designated this rule as not a ''major rule'' as defined by 5 U.S.C. 804(2).

Bureau Signing Authority

The Acting Associate Director for Research, Markets and Regulations, Dan S. Sokolov, having reviewed and approved this document, is delegating the authority to electronically sign this document to Laura Galban, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

List of Subjects

12 CFR Part 213

Advertising, Consumer leasing, Consumer protection, Federal Reserve System, Reporting and recordkeeping requirements.

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enforcement, or any other authority . . . over a motor vehicle dealer that is predominantly engaged in the sale and servicing of motor vehicles, the leasing and servicing of motor vehicles, or both.'' 12 U.S.C. 5519(a). Section 1029(b) of the Dodd-Frank Act provides that subsection (a) shall not apply to any person, to the extent that such person (1) provides consumers with any services related to residential or commercial mortgages or self-financing transactions involving real property; (2) operates a line of business (A) that involves the extension of retail credit or retail leases involving motor vehicles; and (B) in which (i) the extension of retail credit or retail leases are provided directly to consumers; and (ii) the contract governing such extension of retail credit or retail leases is not routinely assigned to an unaffiliated third party finance or leasing source; or (3) offers or provides a consumer financial product or service not involving or related to the sale, financing, leasing, rental, repair, refurbishment, maintenance, or other servicing of motor vehicles, motor vehicle parts, or any related or ancillary product or service. 12 U.S.C. 5519(b).

[6] 12 CFR 213.2(e)(1) (Board) and 12 CFR 1013.2(e)(1) (Bureau).

[7] *See* comments 2(e)–9 in Supplements I of 12 CFR parts 213 and 1013.

[8] *See* 81 FR 86256 (Nov. 30, 2016).

[9] The agencies note that to add new comment 2(e)–11.xii to their respective rules, Supplement I to part 213, *section 213.2 paragraph 2(e)* (Board) and Supplement I to part 1013, *section 1013.2,* paragraph *2(e)* (Bureau) are being republished in their entirety to comply with the **Federal Register's** publication requirement.

[10] 5 U.S.C. 553(b)(B).

[11] 5 U.S.C. 603(a) and 604(a).

[12] 44 U.S.C. 3506; 5 CFR part 1320.

12 CFR Part 1013

Administrative practice and procedure, Advertising, Consumer protection, Reporting and recordkeeping requirements, Truth in lending.

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Authority and Issuance

For the reasons set forth in the preamble, the Board amends Regulation M, 12 CFR part 213, as set forth below:

PART 213—CONSUMER LEASING (REGULATION M)

■ 1. The authority citation for part 213 continues to read as follows:

Authority: 15 U.S.C. 1604 and 1667f; Pub. L. 111–203 § 1100E, 124 Stat. 1376.

■ 2. In Supplement I to Part 213, under *Section 213.2—Definitions,* revise *2(e) Consumer Lease,* as follows:

Supplement I to Part 213—Official Staff Interpretations

* * * * *

Section 213.2—Definitions

* * * * *

2(e) Consumer Lease.

1. *Primary purposes.* A lessor must determine in each case if the leased property will be used primarily for personal, family, or household purposes. If a question exists as to the primary purpose for a lease, the fact that a lessor gives disclosures is not controlling on the question of whether the transaction is covered. The primary purpose of a lease is determined before or at consummation and a lessor need not provide Regulation M disclosures where there is a subsequent change in the primary use.

2. *Period of time.* To be a consumer lease, the initial term of the lease must be more than four months. Thus, a lease of personal property for four months, three months or on a month-to-month or week-to-week basis (even though the lease actually extends beyond four months) is not a consumer lease and is not subject to the disclosure requirements of the regulation. However, a lease that imposes a penalty for not continuing the lease beyond four months is considered to have a term of more than four months. To illustrate:

i. A three-month lease extended on a month-to-month basis and terminated after one year is not subject to the regulation.

ii. A month-to-month lease with a penalty, such as the forfeiture of a security deposit for terminating before one year, is subject to the regulation.

3. *Total contractual obligation.* The total contractual obligation is not necessarily the same as the total of payments disclosed under § 213.4(e). The total contractual obligation includes nonrefundable amounts a lessee is contractually obligated to pay to the lessor, but excludes items such as:

i. Residual value amounts or purchase-option prices;

ii. Amounts collected by the lessor but paid to a third party, such as taxes, licenses, and registration fees.

4. *Credit sale.* The regulation does not cover a lease that meets the definition of a credit sale in Regulation Z, 12 CFR 226.2(a)(16), which is defined, in part, as a bailment or lease (unless terminable without penalty at any time by the consumer) under which the consumer:

i. Agrees to pay as compensation for use a sum substantially equivalent to, or in excess of, the total value of the property and services involved; and

ii. Will become (or has the option to become), for no additional consideration or for nominal consideration, the owner of the property upon compliance with the agreement.

5. *Agricultural purpose.* Agricultural purpose means a purpose related to the production, harvest, exhibition, marketing, transportation, processing, or manufacture of agricultural products by a natural person who cultivates, plants, propagates, or nurtures those agricultural products, including but not limited to the acquisition of personal property and services used primarily in farming. Agricultural products include horticultural, viticultural, and dairy products, livestock, wildlife, poultry, bees, forest products, fish and shellfish, and any products thereof, including processed and manufactured products, and any and all products raised or produced on farms and any processed or manufactured products thereof.

6. *Organization or other entity.* A consumer lease does not include a lease made to an organization such as a corporation or a government agency or instrumentality. Such a lease is not covered by the regulation even if the leased property is used (by an employee, for example) primarily for personal, family or household purposes, or is guaranteed by or subsequently assigned to a natural person.

7. *Leases of personal property incidental to a service.* The following leases of personal property are deemed incidental to a service and thus are not subject to the regulation:

i. Home entertainment systems requiring the consumer to lease equipment that enables a television to receive the transmitted programming.

ii. Security alarm systems requiring the installation of leased equipment intended to monitor unlawful entries into a home and in some cases to provide fire protection.

iii. Propane gas service where the consumer must lease a propane tank to receive the service.

8. *Safe deposit boxes.* The lease of a safe deposit box is not a consumer lease under § 213.2(e).

9. *Threshold amount.* A consumer lease is exempt from the requirements of this part if the total contractual obligation exceeds the threshold amount in effect at the time of consummation. The threshold amount in effect during a particular time period is the amount stated in comment 2(e)–11 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 2(e)–11 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900. If a consumer lease is exempt from the requirements of this Part because the total contractual obligation exceeds the threshold amount in effect at the time of consummation, the lease remains exempt regardless of a subsequent increase in the threshold amount.

10. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

11. *Threshold.* For purposes of § 213.2(e)(1), the threshold amount in effect during a particular period is the amount stated below for that period.

i. Prior to July 21, 2011, the threshold amount is $25,000.

ii. From July 21, 2011 through December 31, 2011, the threshold amount is $50,000.

iii. From January 1, 2012 through December 31, 2012, the threshold amount is $51,800.

iv. From January 1, 2013 through December 31, 2013, the threshold amount is $53,000.

v. From January 1, 2014 through December 31, 2014, the threshold amount is $53,500.

vi. From January 1, 2015 through December 31, 2015, the threshold amount is $54,600.

vii. From January 1, 2016 through December 31, 2016, the threshold amount is $54,600.

viii. From January 1, 2017 through December 31, 2017, the threshold amount is $54,600.

ix. From January 1, 2018 through December 31, 2018, the threshold amount is $55,800.

x. From January 1, 2019 through December 31, 2019, the threshold amount is $57,200.

xi. From January 1, 2020 through December 31, 2020, the threshold amount is $58,300.

xii. From January 1, 2021 through December 31, 2021, the threshold amount is $58,300.

* * * * *

BUREAU OF CONSUMER FINANCIAL PROTECTION

Authority and Issuance

For the reasons set forth in the preamble, the Bureau amends Regulation M, 12 CFR part 1013, as set forth below:

PART 1013—CONSUMER LEASING (REGULATION M)

■ 3. The authority citation for Part 1013 continues to read as follows:

Authority: 15 U.S.C. 1604 and 1667f; Pub. L. 111–203 sec. 1100E, 124 Stat. 1376.

■ 4. In Supplement I to Part 1013, under *Section 1013.2—Definitions,* revise *2(e)—Consumer Lease* to read as follows:

Supplement I to Part 1013—Official Interpretations

* * * * *

Section 1013.2—Definitions

* * * * *

2(e) Consumer Lease

1. *Primary purposes.* A lessor must determine in each case if the leased property will be used primarily for personal, family, or household purposes. If a question exists as to the primary purpose for a lease, the fact that a lessor gives disclosures is not controlling on the question of whether the transaction is covered. The primary purpose of a lease is determined before or at consummation and a lessor need not provide Regulation M disclosures where there is a subsequent change in the primary use.

2. *Period of time.* To be a consumer lease, the initial term of the lease must be more than four months. Thus, a lease of personal property for four months, three months or on a month-to-month or week-to-week basis (even though the lease actually extends beyond four months) is not a consumer lease and is not subject to the disclosure requirements of the regulation. However, a lease that imposes a penalty for not continuing the lease beyond four months is considered to have a term of more than four months. To illustrate:

i. A three-month lease extended on a month-to-month basis and terminated after one year is not subject to the regulation.

ii. A month-to-month lease with a penalty, such as the forfeiture of a security deposit for terminating before one year, is subject to the regulation.

3. *Total contractual obligation.* The total contractual obligation is not necessarily the same as the total of payments disclosed under § 1013.4(e). The total contractual obligation includes nonrefundable amounts a lessee is contractually obligated to pay to the lessor, but excludes items such as:

i. Residual value amounts or purchase-option prices;

ii. Amounts collected by the lessor but paid to a third party, such as taxes, licenses, and registration fees.

4. *Credit sale.* The regulation does not cover a lease that meets the definition of a credit sale in Regulation Z, 12 CFR 226.2(a)(16), which is defined, in part, as a bailment or lease (unless terminable without penalty at any time by the consumer) under which the consumer:

i. Agrees to pay as compensation for use a sum substantially equivalent to, or in excess of, the total value of the property and services involved; and

ii. Will become (or has the option to become), for no additional consideration or for nominal consideration, the owner of the property upon compliance with the agreement.

5. *Agricultural purpose.* Agricultural purpose means a purpose related to the production, harvest, exhibition, marketing, transportation, processing, or manufacture of agricultural products by a natural person who cultivates, plants, propagates, or nurtures those agricultural products, including but not limited to the acquisition of personal property and services used primarily in farming. Agricultural products include horticultural, viticultural, and dairy products, livestock, wildlife, poultry, bees, forest products, fish and shellfish, and any products thereof, including processed and manufactured products, and any and all products raised or produced on farms and any processed or manufactured products thereof.

6. *Organization or other entity.* A consumer lease does not include a lease made to an organization such as a corporation or a government agency or instrumentality. Such a lease is not covered by the regulation even if the leased property is used (by an employee, for example) primarily for personal, family or household purposes, or is guaranteed by or subsequently assigned to a natural person.

7. *Leases of personal property incidental to a service.* The following leases of personal property are deemed incidental to a service and thus are not subject to the regulation:

i. Home entertainment systems requiring the consumer to lease equipment that enables a television to receive the transmitted programming.

ii. Security alarm systems requiring the installation of leased equipment intended to monitor unlawful entries into a home and in some cases to provide fire protection.

iii. Propane gas service where the consumer must lease a propane tank to receive the service.

8. *Safe deposit boxes.* The lease of a safe deposit box is not a consumer lease under § 1013.2(e).

9. *Threshold amount.* A consumer lease is exempt from the requirements of this part if the total contractual obligation exceeds the threshold amount in effect at the time of consummation. The threshold amount in effect during a particular time period is the amount stated in comment 2(e)–11 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 2(e)–11 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900. If a consumer lease is exempt from the requirements of this part because the total contractual obligation exceeds the threshold amount in effect at the time of consummation, the lease remains exempt regardless of a subsequent increase in the threshold amount.

10. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

11. *Threshold.* For purposes of § 1013.2(e)(1), the threshold amount in effect during a particular period is the amount stated below for that period.

i. Prior to July 21, 2011, the threshold amount is $25,000.

ii. From July 21, 2011 through December 31, 2011, the threshold amount is $50,000.

iii. From January 1, 2012 through December 31, 2012, the threshold amount is $51,800.

iv. From January 1, 2013 through December 31, 2013, the threshold amount is $53,000.

v. From January 1, 2014 through December 31, 2014, the threshold amount is $53,500.

vi. From January 1, 2015 through December 31, 2015, the threshold amount is $54,600.

vii. From January 1, 2016 through December 31, 2016, the threshold amount is $54,600.

viii. From January 1, 2017 through December 31, 2017, the threshold amount is $54,600.

ix. From January 1, 2018 through December 31, 2018, the threshold amount is $55,800.

x. From January 1, 2019 through December 31, 2019, the threshold amount is $57,200.

xi. From January 1, 2020 through December 31, 2020, the threshold amount is $58,300.

xii. From January 1, 2021 through December 31, 2021, the threshold amount is $58,300.

* * * * *

By order of the Board of Governors of the Federal Reserve System, acting through the Secretary of the Board under delegated authority.

Ann Misback,

Secretary of the Board.

Laura Galban,

Federal Register Liaison, Bureau of Consumer Financial Protection.

[FR Doc. 2020–25871 Filed 12–9–20; 8:45 am]

BILLING CODE P

FEDERAL RESERVE SYSTEM

12 CFR Part 226

[Docket No. R–1728]

RIN 7100–AF99

BUREAU OF CONSUMER FINANCIAL PROTECTION

12 CFR Part 1026

Truth in Lending (Regulation Z)

AGENCY: Board of Governors of the Federal Reserve System (Board); and Bureau of Consumer Financial Protection (Bureau).

ACTION: Final rules, official interpretations and commentary.

SUMMARY: The Board and the Bureau are publishing final rules amending the official interpretations and commentary for the agencies' regulations that implement the Truth in Lending Act (TILA). The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) amended TILA by requiring that the dollar threshold for exempt consumer credit transactions be adjusted annually by the annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W). If there is no annual percentage increase in the CPI–W, the Board and the Bureau will not adjust this exemption threshold from the prior year. However, in years following a year in which the exemption threshold was not adjusted, the threshold is calculated by applying the annual percentage change in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. Based on the annual percentage increase in the CPI–W as of June 1, 2020, the exemption threshold will remain at $58,300 effective January 1, 2021.

Because the Dodd-Frank Act also requires similar adjustments in the Consumer Leasing Act's threshold for exempt consumer leases, the Board and the Bureau are making similar amendments to each of their respective regulations implementing the Consumer Leasing Act elsewhere in this issue of the **Federal Register**.

DATES: This final rule is effective January 1, 2021.

FOR FURTHER INFORMATION CONTACT: *Board:* Vivian W. Wong, Senior Counsel, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, at (202) 452–3667; for users of Telecommunications Device for the Deaf (TDD) only, contact (202) 263–4869.

Bureau: Rachel Ross, Attorney-Advisor, Office of Regulations, Bureau of Consumer Financial Protection, at (202) 435–7700. If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) increased the threshold in the Truth in Lending Act (TILA) for exempt consumer credit transactions,[1] and the threshold in the Consumer Leasing Act (CLA) for exempt consumer leases, from $25,000 to $50,000, effective July 21, 2011.[2] In addition, the Dodd-Frank Act requires that, on and after December 31, 2011, these thresholds be adjusted annually for inflation by the annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W), as published by the Bureau of Labor Statistics. In April 2011, the Board issued a final rule amending Regulation Z (which implements TILA) consistent with these provisions of the Dodd-Frank Act, along with a similar final rule amending Regulation M (which implements the CLA) (collectively, the Board Final Threshold Rules).[3]

Title X of the Dodd-Frank Act transferred rulemaking authority for a number of consumer financial protection laws from the Board to the Bureau, effective July 21, 2011. In connection with this transfer of rulemaking authority, the Bureau issued its own Regulation Z implementing TILA, 12 CFR part 1026, substantially duplicating the Board's Regulation Z.[4] Although the Bureau has the authority to issue rules to implement TILA for most entities, the Board retains authority to issue rules under TILA for certain motor vehicle dealers covered by section 1029(a) of the Dodd-Frank Act, and the Board's Regulation Z continues to apply to those entities.[5]

The Board's and the Bureau's regulations,[6] and their accompanying commentaries, provide that the exemption threshold will be adjusted annually effective January 1 of each year based on any annual percentage increase in the CPI–W that was in effect on the preceding June 1. They further provide that any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.[7] Since 2011, the Board and the Bureau have adjusted the Regulation Z exemption threshold annually, in accordance with these rules.

On November 30, 2016, the Board and the Bureau published a final rule in the **Federal Register** to memorialize the calculation method used by the agencies

[1] Although consumer credit transactions above the threshold are generally exempt, loans secured by real property or by personal property used or expected to be used as the principal dwelling of a consumer and private education loans are covered by TILA regardless of the loan amount. *See* 12 CFR 226.3(b)(1)(i) (Board) and 12 CFR 1026.3(b)(1)(i) (Bureau).

[2] Public Law 111–203, section 1100E, 124 Stat. 1376, 2111 (2010).

[3] 76 FR 18354 (Apr. 4, 2011); 76 FR 18349 (Apr. 4, 2011).

[4] *See* 76 FR 79768 (Dec. 22, 2011); 81 FR 25323 (Apr. 28, 2016).

[5] Section 1029(a) of the Dodd-Frank Act states: ''Except as permitted in subsection (b), the Bureau may not exercise any rulemaking, supervisory, enforcement, or any other authority . . . over a motor vehicle dealer that is predominantly engaged in the sale and servicing of motor vehicles, the leasing and servicing of motor vehicles, or both.'' 12 U.S.C. 5519(a). Section 1029(b) of the Dodd-Frank Act provides that subsection (a) shall not apply to any person, to the extent that such person (1) provides consumers with any services related to residential or commercial mortgages or self-financing transactions involving real property; (2) operates a line of business (A) that involves the extension of retail credit or retail leases involving motor vehicles; and (B) in which (i) the extension of retail credit or retail leases are provided directly to consumers; and (ii) the contract governing such extension of retail credit or retail leases is not routinely assigned to an unaffiliated third party finance or leasing source; or (3) offers or provides a consumer financial product or service not involving or related to the sale, financing, leasing, rental, repair, refurbishment, maintenance, or other servicing of motor vehicles, motor vehicle parts, or any related or ancillary product or service. 12 U.S.C. 5519(b).

[6] 12 CFR 226.3(b)(1)(ii) (Board) and 12 CFR 1026.3(b)(1)(ii) (Bureau).

[7] *See* comments 3(b)–1 in Supplements I of 12 CFR parts 226 and 1026.

each year to adjust the exemption threshold to ensure that, as contemplated by section 1100E(b) of the Dodd-Frank Act, the values for the exemption threshold keep pace with the CPI–W (Regulation Z Adjustment Calculation Rule).[8] The Regulation Z Adjustment Calculation Rule memorialized the policy that, if there is no annual percentage increase in the CPI–W, the Board and Bureau will not adjust the exemption threshold from the prior year. The Regulation Z Adjustment Calculation Rule also provided that, in years following a year in which the exemption threshold was not adjusted because there was a decrease in the CPI–W from the previous year, the threshold is calculated by applying the annual percentage change in the CPI–W to the dollar amount that would have resulted, after rounding, if the decreases and any subsequent increases in the CPI–W had been taken into account. If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly; if the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted, after rounding.

II. 2021 Adjustment and Commentary Revision

Effective January 1, 2021, the exemption threshold amount remains at $58,300. This amount is based on the CPI–W in effect on June 1, 2020, which was reported on May 12, 2020. The Bureau of Labor Statistics publishes consumer-based indices monthly, but does not report a CPI change on June 1; indices are reported in the middle of the prior month. The CPI–W is a subset of the CPI–U index (based on all urban consumers) and represents approximately 29 percent of the U.S. population. The CPI–W reported on May 12, 2020 reflects a 0.1 percent increase in the CPI–W from April 2019 to April 2020. Accordingly, the 0.1 percent increase in the CPI–W from April 2019 to April 2020 results in an exemption threshold amount of $58,300, after rounding. The Board and the Bureau are revising the commentaries to their respective regulations to add new comment 3(b)-3.xii to state that, from January 1, 2021 through December 31, 2021, the threshold amount is $58,300. These revisions are effective January 1, 2021.[9]

III. Regulatory Analysis

Administrative Procedure Act

Under the Administrative Procedure Act, notice and opportunity for public comment are not required if the Board and the Bureau find that notice and public comment are impracticable, unnecessary, or contrary to the public interest.[10] The amendments in this rule are technical and apply the method previously set forth in the Board Final Threshold Rules and the Regulation Z Adjustment Calculation Rule. For these reasons, the Board and the Bureau have determined that publishing a notice of proposed rulemaking and providing opportunity for public comment are unnecessary. Therefore, the amendments are adopted in final form.

Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) does not apply to a rulemaking where a general notice of proposed rulemaking is not required.[11] As noted previously, the agencies have determined that it is unnecessary to publish a general notice of proposed rulemaking for this joint final rule. Accordingly, the RFA's requirements relating to an initial and final regulatory flexibility analysis do not apply.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995,[12] the agencies reviewed this final rule. No collections of information pursuant to the Paperwork Reduction Act are contained in the final rule.

Bureau Congressional Review Act Statement

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Bureau will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to the rule taking effect. The Office of Information and Regulatory Affairs (OIRA) has designated this rule as not a ''major rule'' as defined by 5 U.S.C. 804(2).

Bureau Signing Authority

The Acting Associate Director for Research, Markets and Regulations, Dan. S. Sokolov, having reviewed and approved this document, is delegating the authority to electronically sign this document to Laura Galban, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

List of Subjects

12 CFR Part 226

Advertising, Consumer protection, Federal Reserve System, Reporting and recordkeeping requirements, Truth in lending.

12 CFR Part 1026

Advertising, Banking, Banks, Consumer protection, Credit, Credit unions, Mortgages, National banks, Reporting and recordkeeping requirements, Savings associations, Truth in lending.

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Authority and Issuance

For the reasons set forth in the preamble, the Board amends Regulation Z, 12 CFR part 226, as set forth below:

PART 226—TRUTH IN LENDING (REGULATION Z)

■ 1. The authority citation for part 226 continues to read as follows:

Authority: 12 U.S.C. 3806; 15 U.S.C. 1604, 1637(c)(5), 1639(l) and 1639h; Pub. L. 111–24, section 2, 123 Stat. 1734; Pub. L. 111–203, 124 Stat. 1376.

■ 2. In Supplement I to part 226, under *Section 226.3—Exempt Transactions,* revise *3(b) Credit over applicable threshold amount,* to read as follows:

Supplement I to Part 226—Official Staff Interpretations

* * * * *

Subpart A—General

* * * * *

Section 226.3—Exempt Transactions

* * * * *

3(b) Credit over applicable threshold amount.

1. *Threshold amount.* For purposes of § 226.3(b), the threshold amount in effect during a particular period is the amount stated in comment 3(b)–3 for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 3(b)–3 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in

[8] *See* 81 FR 86260 (Nov. 30, 2016).

[9] The agencies note that to add new comment 3(b)–3.xii to their respective rules, Supplement I to Part 226, *section 226.3 paragraph 3(b)* (Board) and Supplement I to part 1026, *section 1026.3,* paragraph *3(b)* (Bureau) are being republished in their entirety to comply with the **Federal Register's** publication requirement.

[10] 5 U.S.C. 553(b)(B).

[11] 5 U.S.C. 603(a), 604(a).

[12] 44 U.S.C. 3506; 5 CFR part 1320.

effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.

2. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

3. *Threshold.* For purposes of § 226.3(b), the threshold amount in effect during a particular period is the amount stated below for that period.

i. Prior to July 21, 2011, the threshold amount is $25,000.

ii. From July 21, 2011 through December 31, 2011, the threshold amount is $50,000.

iii. From January 1, 2012 through December 31, 2012, the threshold amount is $51,800.

iv. From January 1, 2013 through December 31, 2013, the threshold amount is $53,000.

v. From January 1, 2014 through December 31, 2014, the threshold amount is $53,500.

vi. From January 1, 2015 through December 31, 2015, the threshold amount is $54,600.

vii. From January 1, 2016 through December 31, 2016, the threshold amount is $54,600.

viii. From January 1, 2017 through December 31, 2017, the threshold amount is $54,600.

ix. From January 1, 2018 through December 31, 2018, the threshold amount is $55,800.

x. From January 1, 2019 through December 31, 2019, the threshold amount is $57,200.

xi. From January 1, 2020 through December 31, 2020, the threshold amount is $58,300.

xii. From January 1, 2021 through December 31, 2021, the threshold amount is $58,300.

4. *Open-end credit.*

i. *Qualifying for exemption.* An open-end account is exempt under § 226.3(b) (unless secured by any real property, or by personal property used or expected to be used as the consumer's principal dwelling) if either of the following conditions is met:

A. The creditor makes an initial extension of credit at or after account opening that exceeds the threshold amount in effect at the time the initial extension is made. If a creditor makes an initial extension of credit after account opening that does not exceed the threshold amount in effect at the time the extension is made, the creditor must have satisfied all of the applicable requirements of this part from the date the account was opened (or earlier, if applicable), including but not limited to the requirements of § 226.6 (account-opening disclosures), § 226.7 (periodic statements), § 226.52 (limitations on fees), and § 226.55 (limitations on increasing annual percentages rates, fees, and charges). For example:

(1) Assume that the threshold amount in effect on January 1 is $50,000. On February 1, an account is opened but the creditor does not make an initial extension of credit at that time. On July 1, the creditor makes an initial extension of credit of $60,000. In this circumstance, no requirements of this part apply to the account.

(2) Assume that the threshold amount in effect on January 1 is $50,000. On February 1, an account is opened but the creditor does not make an initial extension of credit at that time. On July 1, the creditor makes an initial extension of credit of $50,000 or less. In this circumstance, the account is not exempt and the creditor must have satisfied all of the applicable requirements of this part from the date the account was opened (or earlier, if applicable).

B. The creditor makes a firm written commitment at account opening to extend a total amount of credit in excess of the threshold amount in effect at the time the account is opened with no requirement of additional credit information for any advances on the account (except as permitted from time to time with respect to open-end accounts pursuant to § 226.2(a)(20)).

ii. *Subsequent changes generally.* Subsequent changes to an open-end account or the threshold amount may result in the account no longer qualifying for the exemption in § 226.3(b). In these circumstances, the creditor must begin to comply with all of the applicable requirements of this part within a reasonable period of time after the account ceases to be exempt. Once an account ceases to be exempt, the requirements of this part apply to any balances on the account. The creditor, however, is not required to comply with the requirements of this part with respect to the period of time during which the account was exempt. For example, if an open-end credit account ceases to be exempt, the creditor must within a reasonable period of time provide the disclosures required by § 226.6 reflecting the current terms of the account and begin to provide periodic statements consistent with § 226.7. However, the creditor is not required to disclose fees or charges imposed while the account was exempt. Furthermore, if the creditor provided disclosures consistent with the requirements of this part while the account was exempt, it is not required to provide disclosures required by § 226.6 reflecting the current terms of the account. See also comment 3(b)–6.

iii. *Subsequent changes when exemption is based on initial extension of credit.* If a creditor makes an initial extension of credit that exceeds the threshold amount in effect at that time, the open-end account remains exempt under § 226.3(b) regardless of a subsequent increase in the threshold amount, including an increase pursuant to § 226.3(b)(1)(ii) as a result of an increase in the CPI–W. Furthermore, in these circumstances, the account remains exempt even if there are no further extensions of credit, subsequent extensions of credit do not exceed the threshold amount, the account balance is subsequently reduced below the threshold amount (such as through repayment of the extension), or the credit limit for the account is subsequently reduced below the threshold amount. However, if the initial extension of credit on an account does not exceed the threshold amount in effect at the time of the extension, the account is not exempt under § 226.3(b) even if a subsequent extension exceeds the threshold amount or if the account balance later exceeds the threshold amount (for example, due to the subsequent accrual of interest).

iv. *Subsequent changes when exemption is based on firm commitment.*

A. *General.* If a creditor makes a firm written commitment at account opening to extend a total amount of credit that exceeds the threshold amount in effect at that time, the open-end account remains exempt under § 226.3(b) regardless of a subsequent increase in the threshold amount pursuant to § 226.3(b)(1)(ii) as a result of an increase in the CPI–W. However, see comment 3(b)–8 with respect to the increase in the threshold amount from $25,000 to $50,000. If an open-end account is exempt under § 226.3(b) based on a firm commitment to extend credit, the account remains exempt even if the amount of credit actually extended does not exceed the threshold amount. In contrast, if the firm commitment does not exceed the threshold amount at account opening, the account is not exempt under § 226.3(b) even if the account balance later exceeds the threshold amount. In addition, if a creditor reduces a firm commitment, the account ceases to be exempt unless the reduced firm commitment exceeds the threshold amount in effect at the time of the reduction. For example:

(1) Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 226.3(b) based on the creditor's firm commitment to extend $55,000 in credit. If during year one the creditor reduces its firm commitment to $53,000, the account remains exempt under § 226.3(b). However, if during year one the creditor reduces its firm commitment to $40,000, the account is no longer exempt under § 226.3(b).

(2) Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 226.3(b) based on the creditor's firm commitment to extend $55,000 in credit. If the threshold amount is $56,000 on January 1 of year six as a result of increases in the CPI–W, the account remains exempt. However, if the creditor reduces its firm commitment to $54,000 on July 1 of year six, the account ceases to be exempt under § 226.3(b).

B. *Initial extension of credit.* If an open-end account qualifies for a § 226.3(b) exemption

at account opening based on a firm commitment, that account may also subsequently qualify for a § 226.3(b) exemption based on an initial extension of credit. However, that initial extension must be a single advance in excess of the threshold amount in effect at the time the extension is made. In addition, the account must continue to qualify for an exemption based on the firm commitment until the initial extension of credit is made. For example:

(1) Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 226.3(b) based on the creditor's firm commitment to extend $55,000 in credit. The account is not used for an extension of credit during year one. On January 1 of year two, the threshold amount is increased to $51,000 pursuant to § 226.3(b)(1)(ii) as a result of an increase in the CPI–W. On July 1 of year two, the consumer uses the account for an initial extension of $52,000. As a result of this extension of credit, the account remains exempt under § 226.3(b) even if, after July 1 of year two, the creditor reduces the firm commitment to $51,000 or less.

(2) Same facts as in paragraph 4.iv.B(1) of this section except that the consumer uses the account for an initial extension of $30,000 on July 1 of year two and for an extension of $22,000 on July 15 of year two. In these circumstances, the account is not exempt under § 226.3(b) based on the $30,000 initial extension of credit because that extension did not exceed the applicable threshold amount ($51,000), although the account remains exempt based on the firm commitment to extend $55,000 in credit.

(3) Same facts as in paragraph 4.iv.B(1) of this section except that, on April 1 of year two, the creditor reduces the firm commitment to $50,000, which is below the $51,000 threshold then in effect. Because the account ceases to qualify for a § 226.3(b) exemption on April 1 of year two, the account does not qualify for a § 226.3(b) exemption based on a $52,000 initial extension of credit on July 1 of year two.

5. *Closed-end credit.*

i. *Qualifying for exemption.* A closed-end loan is exempt under § 226.3(b) (unless the extension of credit is secured by any real property, or by personal property used or expected to be used as the consumer's principal dwelling; or is a private education loan as defined in § 226.46(b)(5)), if either of the following conditions is met.

A. The creditor makes an extension of credit at consummation that exceeds the threshold amount in effect at the time of consummation. In these circumstances, the loan remains exempt under § 226.3(b) even if the amount owed is subsequently reduced below the threshold amount (such as through repayment of the loan).

B. The creditor makes a commitment at consummation to extend a total amount of credit in excess of the threshold amount in effect at the time of consummation. In these circumstances, the loan remains exempt under § 226.3(b) even if the total amount of credit extended does not exceed the threshold amount.

ii. *Subsequent changes.* If a creditor makes a closed-end extension of credit or commitment to extend closed-end credit that exceeds the threshold amount in effect at the time of consummation, the closed-end loan remains exempt under § 226.3(b) regardless of a subsequent increase in the threshold amount. However, a closed-end loan is not exempt under § 226.3(b) merely because it is used to satisfy and replace an existing exempt loan, unless the new extension of credit is itself exempt under the applicable threshold amount. For example, assume a closed-end loan that qualified for a § 226.3(b) exemption at consummation in year one is refinanced in year ten and that the new loan amount is less than the threshold amount in effect in year ten. In these circumstances, the creditor must comply with all of the applicable requirements of this part with respect to the year ten transaction if the original loan is satisfied and replaced by the new loan, which is not exempt under § 226.3(b). See also comment 3(b)–6.

6. *Addition of a security interest in real property or a dwelling after account opening or consummation.*

i. *Open-end credit.* For open-end accounts, if, after account opening, a security interest is taken in real property, or in personal property used or expected to be used as the consumer's principal dwelling, a previously exempt account ceases to be exempt under § 226.3(b) and the creditor must begin to comply with all of the applicable requirements of this part within a reasonable period of time. See comment 3(b)–4.ii. If a security interest is taken in the consumer's principal dwelling, the creditor must also give the consumer the right to rescind the security interest consistent with § 226.15.

ii. *Closed-end credit.* For closed-end loans, if, after consummation, a security interest is taken in any real property, or in personal property used or expected to be used as the consumer's principal dwelling, an exempt loan remains exempt under § 226.3(b). However, the addition of a security interest in the consumer's principal dwelling is a transaction for purposes of § 226.23, and the creditor must give the consumer the right to rescind the security interest consistent with that section. See § 226.23(a)(1) and the accompanying commentary. In contrast, if a closed-end loan that is exempt under § 226.3(b) is satisfied and replaced by a loan that is secured by any real property, or by personal property used or expected to be used as the consumer's principal dwelling, the new loan is not exempt under § 226.3(b) and the creditor must comply with all of the applicable requirements of this part. See comment 3(b)–5.

7. *Application to extensions secured by mobile homes.* Because a mobile home can be a dwelling under § 226.2(a)(19), the exemption in § 226.3(b) does not apply to a credit extension secured by a mobile home that is used or expected to be used as the principal dwelling of the consumer. See comment 3(b)–6.

8. *Transition rule for open-end accounts exempt prior to July 21, 2011.* Section 226.3(b)(2) applies only to open-end accounts opened prior to July 21, 2011. Section 226.3(b)(2) does not apply if a security interest is taken by the creditor in any real property, or in personal property used or expected to be used as the consumer's principal dwelling. If, on July 20, 2011, an open-end account is exempt under § 226.3(b) based on a firm commitment to extend credit in excess of $25,000, the account remains exempt under § 226.3(b)(2) until December 31, 2011 (unless the firm commitment is reduced to $25,000 or less). If the firm commitment is increased on or before December 31, 2011 to an amount in excess of $50,000, the account remains exempt under § 226.3(b)(1) regardless of subsequent increases in the threshold amount as a result of increases in the CPI–W. If the firm commitment is not increased on or before December 31, 2011 to an amount in excess of $50,000, the account ceases to be exempt under § 226.3(b) based on a firm commitment to extend credit. For example:

i. Assume that, on July 20, 2011, the account is exempt under § 226.3(b) based on the creditor's firm commitment to extend $30,000 in credit. On November 1, 2011, the creditor increases the firm commitment on the account to $55,000. In these circumstances, the account remains exempt under § 226.3(b)(1) regardless of subsequent increases in the threshold amount as a result of increases in the CPI–W.

ii. Same facts as paragraph 8.i. of this section except, on November 1, 2011, the creditor increases the firm commitment on the account to $40,000. In these circumstances, the account ceases to be exempt under § 226.3(b)(2) after December 31, 2011, and the creditor must begin to comply with the applicable requirements of this part.

* * * * *

BUREAU OF CONSUMER FINANCIAL PROTECTION

Authority and Issuance

For the reasons set forth in the preamble, the Bureau amends Regulation Z, 12 CFR part 1026, as set forth below:

PART 1026—TRUTH IN LENDING (REGULATION Z)

■ 3. The authority citation for part 1026 continues to read as follows:

Authority: 12 U.S.C. 2601, 2603–2605, 2607, 2609, 2617, 3353, 5511, 5512, 5532, 5581; 15 U.S.C. 1601 *et seq.*

■ 4. In Supplement I to part 1026, under *Section 1026.3—Exempt Transactions,* revise *3(b)—Credit Over Applicable Threshold Amount* to read as follows:

Supplement I to Part 1026—Official Interpretations

* * * * *

Section 1026.3—Exempt Transactions

* * * * *

3(b) Credit Over Applicable Threshold Amount

1. *Threshold amount.* For purposes of § 1026.3(b), the threshold amount in effect during a particular period is the amount

stated in comment 3(b)–3 below for that period. The threshold amount is adjusted effective January 1 of each year by any annual percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W) that was in effect on the preceding June 1. Comment 3(b)–3 will be amended to provide the threshold amount for the upcoming year after the annual percentage change in the CPI–W that was in effect on June 1 becomes available. Any increase in the threshold amount will be rounded to the nearest $100 increment. For example, if the annual percentage increase in the CPI–W would result in a $950 increase in the threshold amount, the threshold amount will be increased by $1,000. However, if the annual percentage increase in the CPI–W would result in a $949 increase in the threshold amount, the threshold amount will be increased by $900.

2. *No increase in the CPI–W.* If the CPI–W in effect on June 1 does not increase from the CPI–W in effect on June 1 of the previous year, the threshold amount effective the following January 1 through December 31 will not change from the previous year. When this occurs, for the years that follow, the threshold is calculated based on the annual percentage change in the CPI–W applied to the dollar amount that would have resulted, after rounding, if decreases and any subsequent increases in the CPI–W had been taken into account.

i. *Net increases.* If the resulting amount calculated, after rounding, is greater than the current threshold, then the threshold effective January 1 the following year will increase accordingly.

ii. *Net decreases.* If the resulting amount calculated, after rounding, is equal to or less than the current threshold, then the threshold effective January 1 the following year will not change, but future increases will be calculated based on the amount that would have resulted.

3. *Threshold.* For purposes of § 1026.3(b), the threshold amount in effect during a particular period is the amount stated below for that period.

i. Prior to July 21, 2011, the threshold amount is $25,000.

ii. From July 21, 2011 through December 31, 2011, the threshold amount is $50,000.

iii. From January 1, 2012 through December 31, 2012, the threshold amount is $51,800.

iv. From January 1, 2013 through December 31, 2013, the threshold amount is $53,000.

v. From January 1, 2014 through December 31, 2014, the threshold amount is $53,500.

vi. From January 1, 2015 through December 31, 2015, the threshold amount is $54,600.

vii. From January 1, 2016 through December 31, 2016, the threshold amount is $54,600.

viii. From January 1, 2017 through December 31, 2017, the threshold amount is $54,600.

ix. From January 1, 2018 through December 31, 2018, the threshold amount is $55,800.

x. From January 1, 2019 through December 31, 2019, the threshold amount is $57,200.

xi. From January 1, 2020 through December 31, 2020, the threshold amount is $58,300.

xii. From January 1, 2021 through December 31, 2021, the threshold amount is $58,300.

4. *Open-end credit.* i. *Qualifying for exemption.* An open-end account is exempt under § 1026.3(b) (unless secured by real property, or by personal property used or expected to be used as the consumer's principal dwelling) if either of the following conditions is met:

A. The creditor makes an initial extension of credit at or after account opening that exceeds the threshold amount in effect at the time the initial extension is made. If a creditor makes an initial extension of credit after account opening that does not exceed the threshold amount in effect at the time the extension is made, the creditor must have satisfied all of the applicable requirements of this part from the date the account was opened (or earlier, if applicable), including but not limited to the requirements of § 1026.6 (account-opening disclosures), § 1026.7 (periodic statements), § 1026.52 (limitations on fees), and § 1026.55 (limitations on increasing annual percentage rates, fees, and charges). For example:

1. Assume that the threshold amount in effect on January 1 is $50,000. On February 1, an account is opened but the creditor does not make an initial extension of credit at that time. On July 1, the creditor makes an initial extension of credit of $60,000. In this circumstance, no requirements of this part apply to the account.

2. Assume that the threshold amount in effect on January 1 is $50,000. On February 1, an account is opened but the creditor does not make an initial extension of credit at that time. On July 1, the creditor makes an initial extension of credit of $50,000 or less. In this circumstance, the account is not exempt and the creditor must have satisfied all of the applicable requirements of this part from the date the account was opened (or earlier, if applicable).

B. The creditor makes a firm written commitment at account opening to extend a total amount of credit in excess of the threshold amount in effect at the time the account is opened with no requirement of additional credit information for any advances on the account (except as permitted from time to time with respect to open-end accounts pursuant to § 1026.2(a)(20)).

ii. *Subsequent changes generally.* Subsequent changes to an open-end account or the threshold amount may result in the account no longer qualifying for the exemption in § 1026.3(b). In these circumstances, the creditor must begin to comply with all of the applicable requirements of this part within a reasonable period of time after the account ceases to be exempt. Once an account ceases to be exempt, the requirements of this part apply to any balances on the account. The creditor, however, is not required to comply with the requirements of this part with respect to the period of time during which the account was exempt. For example, if an open-end credit account ceases to be exempt, the creditor must within a reasonable period of time provide the disclosures required by § 1026.6 reflecting the current terms of the account and begin to provide periodic statements consistent with § 1026.7. However, the creditor is not required to disclose fees or charges imposed while the account was exempt. Furthermore, if the creditor provided disclosures consistent with the requirements of this part while the account was exempt, it is not required to provide disclosures required by § 1026.6 reflecting the current terms of the account. See also comment 3(b)–6.

iii. *Subsequent changes when exemption is based on initial extension of credit.* If a creditor makes an initial extension of credit that exceeds the threshold amount in effect at that time, the open-end account remains exempt under § 1026.3(b) regardless of a subsequent increase in the threshold amount, including an increase pursuant to § 1026.3(b)(1)(ii) as a result of an increase in the CPI–W. Furthermore, in these circumstances, the account remains exempt even if there are no further extensions of credit, subsequent extensions of credit do not exceed the threshold amount, the account balance is subsequently reduced below the threshold amount (such as through repayment of the extension), or the credit limit for the account is subsequently reduced below the threshold amount. However, if the initial extension of credit on an account does not exceed the threshold amount in effect at the time of the extension, the account is not exempt under § 1026.3(b) even if a subsequent extension exceeds the threshold amount or if the account balance later exceeds the threshold amount (for example, due to the subsequent accrual of interest).

iv. *Subsequent changes when exemption is based on firm commitment.*

A. *General.* If a creditor makes a firm written commitment at account opening to extend a total amount of credit that exceeds the threshold amount in effect at that time, the open-end account remains exempt under § 1026.3(b) regardless of a subsequent increase in the threshold amount pursuant to § 1026.3(b)(1)(ii) as a result of an increase in the CPI–W. However, see comment 3(b)–8 with respect to the increase in the threshold amount from $25,000 to $50,000. If an open-end account is exempt under § 1026.3(b) based on a firm commitment to extend credit, the account remains exempt even if the amount of credit actually extended does not exceed the threshold amount. In contrast, if the firm commitment does not exceed the threshold amount at account opening, the account is not exempt under § 1026.3(b) even if the account balance later exceeds the threshold amount. In addition, if a creditor reduces a firm commitment, the account ceases to be exempt unless the reduced firm commitment exceeds the threshold amount in effect at the time of the reduction. For example:

1. Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 1026.3(b) based on the creditor's firm commitment to extend $55,000 in credit. If during year one the creditor reduces its firm commitment to $53,000, the account remains exempt under § 1026.3(b). However, if during year one the creditor reduces its firm commitment to $40,000, the account is no longer exempt under § 1026.3(b).

2. Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 1026.3(b) based on the creditor's firm commitment to extend $55,000 in credit. If the threshold amount is $56,000 on January 1 of year six as a result of increases in the CPI–W, the account remains exempt. However, if the creditor reduces its firm commitment to $54,000 on July 1 of year six, the account ceases to be exempt under § 1026.3(b).

B. *Initial extension of credit.* If an open-end account qualifies for a § 1026.3(b) exemption at account opening based on a firm commitment, that account may also subsequently qualify for a § 1026.3(b) exemption based on an initial extension of credit. However, that initial extension must be a single advance in excess of the threshold amount in effect at the time the extension is made. In addition, the account must continue to qualify for an exemption based on the firm commitment until the initial extension of credit is made. For example:

1. Assume that, at account opening in year one, the threshold amount in effect is $50,000 and the account is exempt under § 1026.3(b) based on the creditor's firm commitment to extend $55,000 in credit. The account is not used for an extension of credit during year one. On January 1 of year two, the threshold amount is increased to $51,000 pursuant to § 1026.3(b)(1)(ii) as a result of an increase in the CPI–W. On July 1 of year two, the consumer uses the account for an initial extension of $52,000. As a result of this extension of credit, the account remains exempt under § 1026.3(b) even if, after July 1 of year two, the creditor reduces the firm commitment to $51,000 or less.

2. Same facts as in paragraph 4.iv.B.1 of this section except that the consumer uses the account for an initial extension of $30,000 on July 1 of year two and for an extension of $22,000 on July 15 of year two. In these circumstances, the account is not exempt under § 1026.3(b) based on the $30,000 initial extension of credit because that extension did not exceed the applicable threshold amount ($51,000), although the account remains exempt based on the firm commitment to extend $55,000 in credit.

3. Same facts as in paragraph 4.iv.B.1 of this section except that, on April 1 of year two, the creditor reduces the firm commitment to $50,000, which is below the $51,000 threshold then in effect. Because the account ceases to qualify for a § 1026.3(b) exemption on April 1 of year two, the account does not qualify for a § 1026.3(b) exemption based on a $52,000 initial extension of credit on July 1 of year two.

5. *Closed-end credit.* i. *Qualifying for exemption.* A closed-end loan is exempt under § 1026.3(b) (unless the extension of credit is secured by real property, or by personal property used or expected to be used as the consumer's principal dwelling; or is a private education loan as defined in § 1026.46(b)(5)), if either of the following conditions is met:

A. The creditor makes an extension of credit at consummation that exceeds the threshold amount in effect at the time of consummation. In these circumstances, the loan remains exempt under § 1026.3(b) even if the amount owed is subsequently reduced below the threshold amount (such as through repayment of the loan).

B. The creditor makes a commitment at consummation to extend a total amount of credit in excess of the threshold amount in effect at the time of consummation. In these circumstances, the loan remains exempt under § 1026.3(b) even if the total amount of credit extended does not exceed the threshold amount.

ii. *Subsequent changes.* If a creditor makes a closed-end extension of credit or commitment to extend closed-end credit that exceeds the threshold amount in effect at the time of consummation, the closed-end loan remains exempt under § 1026.3(b) regardless of a subsequent increase in the threshold amount. However, a closed-end loan is not exempt under § 1026.3(b) merely because it is used to satisfy and replace an existing exempt loan, unless the new extension of credit is itself exempt under the applicable threshold amount. For example, assume a closed-end loan that qualified for a § 1026.3(b) exemption at consummation in year one is refinanced in year ten and that the new loan amount is less than the threshold amount in effect in year ten. In these circumstances, the creditor must comply with all of the applicable requirements of this part with respect to the year ten transaction if the original loan is satisfied and replaced by the new loan, which is not exempt under § 1026.3(b). See also comment 3(b)–6.

6. *Addition of a security interest in real property or a dwelling after account opening or consummation.* i. *Open-end credit.* For open-end accounts, if after account opening a security interest is taken in real property, or in personal property used or expected to be used as the consumer's principal dwelling, a previously exempt account ceases to be exempt under § 1026.3(b) and the creditor must begin to comply with all of the applicable requirements of this part within a reasonable period of time. See comment 3(b)–4.ii. If a security interest is taken in the consumer's principal dwelling, the creditor must also give the consumer the right to rescind the security interest consistent with § 1026.15.

ii. *Closed-end credit.* For closed-end loans, if after consummation a security interest is taken in real property, or in personal property used or expected to be used as the consumer's principal dwelling, an exempt loan remains exempt under § 1026.3(b). However, the addition of a security interest in the consumer's principal dwelling is a transaction for purposes of § 1026.23, and the creditor must give the consumer the right to rescind the security interest consistent with that section. See § 1026.23(a)(1) and its commentary. In contrast, if a closed-end loan that is exempt under § 1026.3(b) is satisfied and replaced by a loan that is secured by real property, or by personal property used or expected to be used as the consumer's principal dwelling, the new loan is not exempt under § 1026.3(b), and the creditor must comply with all of the applicable requirements of this part. See comment 3(b)–5.

7. *Application to extensions secured by mobile homes.* Because a mobile home can be a dwelling under § 1026.2(a)(19), the exemption in § 1026.3(b) does not apply to a credit extension secured by a mobile home that is used or expected to be used as the principal dwelling of the consumer. See comment 3(b)–6.

8. *Transition rule for open-end accounts exempt prior to July 21, 2011.* Section 1026.3(b)(2) applies only to open-end accounts opened prior to July 21, 2011. Section 1026.3(b)(2) does not apply if a security interest is taken by the creditor in real property, or in personal property used or expected to be used as the consumer's principal dwelling. If, on July 20, 2011, an open-end account is exempt under § 1026.3(b) based on a firm commitment to extend credit in excess of $25,000, the account remains exempt under § 1026.3(b)(2) until December 31, 2011 (unless the firm commitment is reduced to $25,000 or less). If the firm commitment is increased on or before December 31, 2011 to an amount in excess of $50,000, the account remains exempt under § 1026.3(b)(1) regardless of subsequent increases in the threshold amount as a result of increases in the CPI–W. If the firm commitment is not increased on or before December 31, 2011 to an amount in excess of $50,000, the account ceases to be exempt under § 1026.3(b) based on a firm commitment to extend credit. For example:

i. Assume that, on July 20, 2011, the account is exempt under § 1026.3(b) based on the creditor's firm commitment to extend $30,000 in credit. On November 1, 2011, the creditor increases the firm commitment on the account to $55,000. In these circumstances, the account remains exempt under § 1026.3(b)(1) regardless of subsequent increases in the threshold amount as a result of increases in the CPI–W.

ii. Same facts as paragraph 8.i of this section except, on November 1, 2011, the creditor increases the firm commitment on the account to $40,000. In these circumstances, the account ceases to be exempt under § 1026.3(b)(2) after December 31, 2011, and the creditor must begin to comply with the applicable requirements of this part.

* * * * *

By order of the Board of Governors of the Federal Reserve System, acting through the Secretary of the Board under delegated authority.

Ann Misback,

Secretary of the Board.

Laura Galban,

Federal Register Liaison, Bureau of Consumer Financial Protection.

[FR Doc. 2020–25870 Filed 12–9–20; 8:45 am]

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BUREAU OF CONSUMER FINANCIAL PROTECTION

12 CFR Part 1026

Truth in Lending (Regulation Z); Private Education Loans

AGENCY: Bureau of Consumer Financial Protection.

ACTION: Advisory opinion.

SUMMARY: The Bureau of Consumer Financial Protection (Bureau) is issuing this advisory opinion to clarify that loan products that refinance or consolidate a consumer's pre-existing Federal, or Federal and private, education loans meet the definition of ''private education loan'' in the Truth in Lending Act and Regulation Z and are subject to the disclosure and consumer protection requirements in subpart F of Regulation Z. This advisory opinion is an interpretive rule under the Administrative Procedure Act.

DATES: This Advisory Opinion is effective on December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Shelley Thompson, Counsel, Office of Regulations, at 202–435–7700 or *https://reginquiries.consumerfinance.gov/.* If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

SUPPLEMENTARY INFORMATION: The Bureau is issuing this advisory opinion through the procedures for its Advisory Opinions Policy.[1] Refer to those procedures for more information.

I. Advisory Opinion

A. Background

1. Growth of the Postsecondary Education Loan Market

The postsecondary education loan market has swelled in the past decade and education debt has become an increasingly large share of total household debt, from 5 percent in 2008 to 11 percent in 2020.[2] Education loans issued or guaranteed by the Federal government, through title IV of the Higher Education Act of 1965,[3] which are administered by the U.S. Department of Education,[4] currently comprise over 92 percent of the education loan market.[5] Between 2006 and 2012, the share of non-Federal education loans issued by private lenders ranged from 9 percent to 13 percent, and since then, the share of total outstanding education loans held by private lenders has been about 8 percent.[6]

Prior to 2010, education loans were primarily issued through the Federal Family Education Loan Program (FFELP).[7] Under the FFELP, banks and other private creditors issued education loans that were subsidized and guaranteed by the Federal government.[8] The Health Care and Education Reconciliation Act of 2010 prohibited the origination of new FFELP loans after June 30, 2010, at which point Direct Loans issued under the William D. Ford Direct Loan Program became the predominant type of Federal education loan.[9] Direct Loans are issued and owned by the U.S. Department of Education.[10] FFELP loans, Direct Loans, and other title IV loans are administered by the Department of Education and include borrower protections such as postponement options, income-driven repayment options, in-school deferrals, no prepayment penalties, and loan forgiveness.[11]

Most FFELP and Direct loans have fixed interest rates that are determined by Federal statute.[12] Between 2006 and

[1] Bureau of Consumer Fin. Prot., *Advisory Opinions Policy* (Nov. 2020), *https://files.consumerfinance.gov/f/documents/cfpb_advisory-opinion_policy_2020-11.pdf.*

[2] According to data compiled by the Federal Reserve Bank of New York (FRBNY), the nation's education indebtedness now ranks as the second largest source of consumer credit at the end of June 2020. Fed. Reserve Bank of New York Consumer Credit Panel/Equifax, *Total Debt Balance and its Composition, https://www.newyorkfed.org/microeconomics/data.html* (last visited Oct. 30, 2020).

[3] Public Law 89–392, tit. IV, 79 stat. 1219, 1232 (1965).

[4] The Direct Loan program was created by the Higher Education Amendments of 1992, Public Law 102–325, 106 Stat. 448 (1992), as a pilot program and expanded by the Student Loan Reform Act of 1993, Public Law 103–66, tit. IV, subtit. A, 107 stat. 341 (1993). It was authorized by Omnibus Budget Reconciliation Act of 1993, Public Law 103–66, 107 stat. 312 (1993) and amended by the Health Care and Education Reconciliation Act of 2010, Public Law111–152, 124 stat. 1029 (2010). Under this program, loan capital is provided by the Federal government while loan origination and servicing is handled by postsecondary institutions and private sector companies under contract with the Department of Education, *see STUDENT LOANS OVERVIEW: Fiscal Year 2011 Budget Request, https://www2.ed.gov/about/overview/budget/budget11/justifications/t-loansoverview.pdf* (last visited Oct. 30, 2020). Title IV loan programs include, among others, Direct Federal Loans and federally guaranteed loans issued by private education creditors under the Federal Family Education Loan Program (FFELPP). No new FFELPP loans have been issued since mid-2010. U.S. Dep't of Educ., *Dear Colleague Letter GEN–10–05* (Apr. 2, 2010), *https://ifap.ed.gov/sites/default/files/attachments/dpcletters/GEN1005.pdf* (Dear Colleague Letter).

[5] According to the Federal Reserve Board (Board), outstanding student loans totaled $1.7 trillion as of September 30, 2020. *Consumer Credit G.19* (Nov. 6, 2020), *https://www.federalreserve.gov/releases/g19/current/.* According to the Department of Education, the outstanding portfolio of title IV education loans totaled $1.566 trillion as of September 30, 2020, *see https://www2.ed.gov/about/reports/annual/2020report/fsa-report.pdf* (*Federal Student Aid Annual Report 2020,* p. 7) (last visited Oct. 30, 2020).

[6] Private loan market share data are based an analysis of data provided by the Federal Reserve Board and the Department of Education. Fed. Reserve Sys., *G.19 Consumer Credit Series, http://www.federalreserve.gov/releases/g19/current/default.htm* (last visited Nov. 2, 2020); Portfolio Summary, *supra* note 5; U.S. Dep't of Educ., *STUDENT LOANS OVERVIEW: Fiscal Year 2010 Budget Request,* at T–14, *https://www2.ed.gov/about/overview/budget/budget10/justifications/t-loansoverview.pdf* (last visited Nov. 12, 2020) (STUDENT LOANS OVERVIEW 2010). The G.19 series does not provide data prior to 2006. The market share data are based on the outstanding dollar balance of education loans as of the end of the Federal fiscal year (September 30). The Federal loan data include Subsidized Stafford, Unsubsidized Stafford, Parent PLUS, Graduate PLUS, and Consolidation loans issued under the Federal Family Education Loan and Direct Loan programs, as well as Federal Perkins Loans. The private loan market share includes private consolidation and refinancing loans, but there are no published data for private lenders issuing education loans that show the mix of in-school loans versus consolidation and refinancing loans.

[7] The Department of Education publishes annual origination volume for both FFELP and Direct Loans. *See generally Title IV Program Volume Reports, Loan Volume, https://studentaid.gov/data-center/student/title-iv* (last visited Oct. 30, 2020). *See also* College Bd., *Trends in Student Aid—Resource Library, https://research.collegeboard.org/trends/student-aid/resource-library* (last visited Oct. 30, 2020).

[8] Cong. Research Serv., *Federal Student Loans Made Under the Federal Family Education Loan Program and the William D. Ford Federal Direct Loan Program: Terms and Conditions for Borrowers,* at 1 (June 22, 2015), *https://www.everycrsreport.com/files/20150622_R40122_706aeb5efb5ea2ec87fbd5818f32a43987639676.pdf* (Federal Student Loans).

[9] Health Care and Education Reconciliation Act of 2010, Public Law 111–152, tit. II, section 2201, 124 stat. 1029, 1074 (2010); Dear Colleague Letter, *supra* note 3.

[10] *See* Fed. Student Aid, U.S. Dep't of Educ., *https://studentaid.gov/sites/default/files/fsawg/datacenter/library/PortfolioSummary.xls* (last visited Oct. 30, 2020) (Portfolio Summary).

[11] Cong. Research Serv., *Federal Student Loans Made Under the Federal Family Education Loan Program and the William D. Ford Federal Direct Loan Program: Terms and Conditions for Borrowers* (June 7, 2013), *https://fas.org/sgp/crs/misc/R40122.pdf.*

[12] Currently, the interest rate for Direct Loans is determined annually for all loans first disbursed during any 12-month period beginning on July 1 and ending on June 30, and is equal to the high yield of the 10-year Treasury notes auctioned at the final auction held before June 1 of that 12-month period, plus a statutory add-on percentage that varies depending on the loan type and, for Direct Unsubsidized Loans, whether the loan was made to an undergraduate or graduate student. Loans first disbursed during different 12-month periods may have different interest rates, but the rate determined for any loan is a fixed interest rate for the life of the loan. For each loan type, the calculated interest rate may not exceed a maximum rate specified in the Higher Education Act of 1965. The maximum interest rates are 8.25 percent for Direct Subsidized Loans and Direct Unsubsidized Loans made to undergraduate students, 9.50 percent for Direct Unsubsidized Loans made to graduate and professional students, and 10.50 percent for Direct PLUS Loans made to parents of dependent undergraduate students or to graduate or professional students. U.S. Dep't of Educ., *Federal Student Aid; Interest Rates for Direct Loans First Disbursed Between July 1, 2020 and June 30, 2021*

2013, these statutes set fixed interest rates for most loans issued to undergraduate students at 6.8 percent; Federal PLUS loan [13] rates were set at 8.5 percent for FFELP loans and 7.9 percent for Direct Loans at 7.9 percent.[14] In contrast, by late 2011, private education creditors were offering interest rates of 2.98 percent to 3.55 percent for borrowers with prime or super prime credit scores.[15] This interest rate differential created incentives for prime and super prime borrowers with high fixed-rate Federal education loans to consolidate or refinance their loans into a lower rate education loan product.

2. Consolidation of Education Loans

The market for consolidation or refinance of Federal education loans by private lenders largely did not exist prior to 2006, because there was little to no demand for such a private product. Between 2001 and 2006, nearly all consolidations of Federal education loans were through the Federal government's loan consolidation program.[16] The interest rate on Federal consolidation loans is generally the weighted average of interest rates on the loans consolidated.[17] Because most Federal loans issued prior to July 1, 2006 charged variable rates, Federal consolidation loans allowed borrowers to take advantage of a downturn in interest rates to lock in fixed interest rates as low as 2.875 percent.[18] Federal consolidation loans also generally offer the same deferment, forbearance, and discharge benefits available on the underlying Federal loans and a wide range of repayment options, including income-driven repayment.[19] The few private creditors who offered education consolidation and refinance loans during this period typically offered variable-rate loans and did not offer the wide range of Federal loan repayment, deferment, forbearance, and discharge options.[20] In addition, education consolidation and refinance loans offered by private creditors typically did not allow borrowers to consolidate or refinance any Federal loans.[21] However, in 2006, legislative changes took effect which changed interest rates for Federal loans from variable rates to fixed rates, initially ranging from 6.8 percent to 8.5 percent, depending on the type of loan and whether the loan was issued under the Direct or FFELP program.[22] Thus, for loans originated after June 2006, a borrower no longer had the ability to take advantage of a drop in market interest rates to lock in a low interest rate through a Federal loan consolidation.[23]

This change from variable to fixed rates on Federal loans led to an opening in the market for private lenders to offer a product that would allow borrowers with high fixed interest rate Federal loans to consolidate or refinance those loans and obtain a lower interest rate. In 2012, a few private creditors began offering private loan consolidation and refinance products that allowed borrowers who had graduated and were in repayment to consolidate or refinance their Federal education loans to reduce their interest rate.[24] These products are marketed to consumers with both high interest rate Federal education loans (which were generally issued or extended beginning in 2006) and prime

(May 15, 2020), *https://ifap.ed.gov/electronic-announcements/051520InterRatesforDLFirstDisbBetw070120and063021* (last visited Oct. 30, 2020). Most Stafford and PLUS loans issued prior to July 2006 carry variable rates, *Annual Notice of Interest Rates for Variable-Rate Federal Student Loans Made Under the William D. Ford Federal Direct Loan Program* (Jan. 15, 2020), *https://www.federalregister.gov/documents/2020/01/15/2020-00572/annual-notice-of-interest-rates-for-variable-rate-federal-student-loans-made-under-the-william-d. Interest rate formulas for FFELP loans can be found here: https://ifap.ed.gov/ffel-variable-interest-rates/061220FFELVarIntRatePeriodJuly1June30.*

[13] Direct PLUS Loans are Federal loans that graduate or professional students and parents of dependent undergraduate students use to help pay for education expenses. *See https://studentaid.gov/help-center/answers/topic/glossary/article/direct-plus-loan* (last visited Nov. 12, 2020).

[14] U.S. Dep't of Educ., *Federal Student Aid; Understand how interest is calculated and what fees are associated with your Federal student loan, https://studentaid.gov/understand-aid/types/loans/interest-rates* (last visited Oct. 30, 2020).

[15] ''[R]ates for PSL borrowers vary widely with their credit scores. In terms of recent (December 31, 2011) offerings, the Sample Lenders reported low-end variable rates of 2.98% to 3.55%.'' Bureau of Consumer Fin. Prot., *Private Student Loans,* at 12 (Aug. 29, 2012), *https://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf.*

[16] ''A favorable interest rate environment and highly competitive marketing resulted in a dramatic surge in FFEL Consolidation Loan volume from FY 2001 to FY 2006 where volume grew from $9.4 billion to a record high $72 billion. Direct Loan Consolidation Loan volume also increased significantly during this period, growing from $7.8 billion in FY 2001 to over $19 billion in FY 2006. While the Direct Loan increase was not as large as FFEL, borrowers in both programs sought to lock in lower interest rates through consolidation, prior to the annual variable in-repayment interest rate jumping from 5.3 percent to 7.14 percent as of July 1, 2006. However, FFEL Consolidation Loan volume decreased substantially in FY 2007 and FY 2008 reflecting a saturated marketplace, an end to 'two-step consolidation,' and the statutory change to fixed borrower interest rates. Consolidation volume in Direct Loans also decreased substantially in FY 2007, but has been increasing since then. . . .'' STUDENT LOANS OVERVIEW 2010, *supra* note 6, at T–14.

[17] Specifically, the interest rate is the weighted average of interest rates on the loans consolidated, rounded to the nearest higher one-eighth of 1 percent (and capped at 8.25 percent for the 2001–2006 time period discussed), Federal Student Loans, *supra* note 8.

[18] STUDENT LOANS OVERVIEW 2010, *supra* note 6, at T–14. *See also* Federal Student Loans, *supra* note 7. *See also http://www.nelnetinvestors.com/news/press-release-details/2004/Families-Benefit-From-Record-Low-Student-Loan-Interest-Rates/default.aspx.*

[19] Repayment plans, deferment and forbearance options, and loan discharge benefits are detailed in the promissory notes for Direct Loans. These can be found at: *https://ifap.ed.gov/sites/default/files/attachments/2020-04/SubUnsubMPN.pdf, https://ifap.ed.gov/sites/default/files/attachments/2020-04/PLUSMPN.pdf,* and *https://studentaid.gov/app-static/images/ApplicationAndPromissoryNote.pdf* (all last visited Nov. 18, 2020).

[20] Natalie Cox, *Pricing, Selection, and Welfare in the Student Loan Market: Evidence from Borrower Repayment Decisions,* at 3 n.5 (Jan. 12, 2017). *See also* Sallie Mae SLM CORPORATION ANNUAL REPORT 2005, at 5 (2005), *https://www.salliemae.com/assets/investors/shareholder/annual-reports/SallieMaeFY2005AnnualReport1.pdf;* The 2007 UNITED STATES SECURITIES AND EXCHANGE COMMISSION Form-10K, at 5, 13, *https://www.salliemae.com/assets/investors/shareholder/annual-reports/200610K.pdf* (last visited Nov. 2, 2020); *see* The 2007 UNITED STATES SECURITIES AND EXCHANGE COMMISSION Form-10K, at 28, *https://www.salliemae.com/assets/investors/shareholder/annual-reports/BOW76911BOW024_BITS_N_1548.pdf* (last visited Nov. 2, 2020). Bureau of Consumer Fin. Prot., *Private Student Loans* at 12–13 (Aug. 29, 2013), *https://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf.*

[21] Forbes, *Tips On Consolidating Student Loans* (Apr. 15, 2009), *https://www.forbes.com/2009/04/15/student-loans-moneybuilder-personal-finance-consolidate.html?sh=ddb7c2714e50.*

[22] Legislation enacted in 2002 authorized the transition of Federal student loan interest rates from formula-based, variable rates to fixed rates, beginning in July 2006 and set a fixed rate of 6.8 percent for Stafford loans and 7.9 percent for PLUS loans. The Student Loan Interest Rates Act of 2002, Public Law 107–139, 116 stat. 9 (2002). 2005 legislation increased the PLUS loan rate to 8.5 percent for PLUS loans issued under the Federal Family Education Loan Program. The Deficit Reduction Act of 2005, Public Law 109–171, 120 stat. 159 (2006). In 2007, Congress gradually lowered the fixed rates for subsidized Stafford loans issued to undergraduate students, starting with 6 percent for the 2007–2008 financial aid award year, and dropping to 3.4 percent for the 2011–12 award year. The rate for subsidized loans for graduate students and all unsubsidized Stafford loans (for undergraduate and graduate students) remained at 6.8 percent. The College Cost Reduction and Access Act of 2007, Public Law 110–84, 121 stat. 784, 790–791 (2007).

[23] Direct Loan consolidations still remain popular for the benefits they provide such as access to income-driven repayment and loan forgiveness programs. (FFELP consolidation origination authority ceased as of July 1, 2010.) The Department of Education provides a guide to loan terms, including repayment plans, deferment and forbearance options, loan discharge and forgiveness programs, *see* Fed. Student Aid, U.S. Dep't of Educ., *Understanding Student Loan Repayment, https://studentaid.gov/h/manage-loans* (last visited Nov. 12, 2020); U.S. Dep't of Educ., *Important Information for Student Borrowers on U.S. Treasury Changes to Federal Student Loan Interest Rates, https://www2.ed.gov/students/college/repay/2006-changes.html* (last modified June 6, 2006).

[24] U.S. Dep't of Treasury, *Opportunities and Challenges in Online Marketplace Lending,* at 9–10, 14–19 (May 10, 2016), *https://home.treasury.gov/system/files/231/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf.*

or super prime [25] credit scores.[26] The market for private consolidation and refinancing of Federal education loans has continued to expand in recent years.[27] In 2019, annual originations of private consolidation and refinance education loan products reached an estimated $16 billion,[28] which was larger than that year's originations for private education loans by currently enrolled students.[29]

As the market for private consolidations and refinancings of Federal student loans has grown, some industry participants have expressed uncertainty about the application of Regulation Z, which implements the Truth in Lending Act (TILA), to these loan products. Questions have arisen regarding whether consolidation and refinance products that satisfy and replace a consumer's existing Federal loans (or existing Federal and private loans) are considered ''private education loans'' such that the disclosures and other protections under subpart F of Regulation Z [30] are required. Specifically, creditors need to know whether they are required to provide disclosures under TILA and Regulation Z, and if so, which disclosures they are required to provide. If the loan is not considered a private education loan and is over $50,000, then the loan is not covered under TILA and Regulation Z, and a creditor is not required to provide any disclosures to the consumer.[31] For loans *under* $50,000, whether a loan is a ''private education loan'' determines whether creditors must comply with either the private education loan disclosure requirements or installment loan disclosure requirements, because it is impossible to comply with both sets of requirements simultaneously.[32]

B. Coverage

This advisory opinion generally covers private loan consolidation products that satisfy and replace multiple Federal, or Federal and private, loans, as well as private loan refinance products that satisfy and replace a single Federal or private loan. This advisory opinion does not cover loans that are made, insured, or guaranteed by the Federal government under title IV of the Higher Education Act of 1965. For purposes of this advisory opinion, the terms ''private creditor'' or ''private education creditor'' broadly refer to creditors (other than the U.S. Department of Education) who offer refinance or consolidation products for education loans, regardless of whether the creditors themselves are private persons or institutions and whether they offer products other than education loans.

C. Legal Analysis

The Higher Education Opportunity Act of 2008 (HEOA) amended TILA by adding new requirements that apply to creditors making ''private education loans.'' [33] For example, HEOA's amendments to TILA require creditors making ''private education loans'' to provide special disclosures; [34] prohibits creditors from co-branding with schools; [35] requires creditors to provide a 30-day rumination period; [36] and mandates that borrowers have a right to cancel within three days of fund disbursement.[37]

HEOA amended TILA such that private education loans over a certain threshold—$25,000 at the time of HEOA was passed, and $50,000 after the passage of the Dodd-Frank Act [38]—were no longer excluded from coverage.[39] In relevant part, HOEA defined a ''private education loan'' under TILA as a loan that is (1) not ''made, insured, or guaranteed under title IV of the Higher Education Act of 1965,'' and (2) ''issued expressly for postsecondary educational expenses to a borrower, regardless of whether the loan is provided through the educational institution that the subject student attends or directly to the borrower from the private educational lender.'' [40] On August 14, 2009, the Board issued final amendments to TILA's implementing regulation, Regulation Z. The Board also issued commentary to those amendments, including subpart F, which interpreted the term ''private education loan'' to include ''loans extended to consolidate a consumer's pre-existing private education loans.'' [41]

Questions have arisen regarding whether the refinance and consolidation loans covered by this advisory opinion are ''private education loans'' under the two conditions set forth in HEOA. The first condition is met because these loans are originated by private education creditors and are not originated or insured by the Federal government or otherwise under title IV of the Higher Education Act of 1965. Thus, this advisory opinion focuses on whether such loans meet the second condition—that is, are they issued or extended by creditors ''expressly for postsecondary educational

[25] There are variations in prime and super prime ranges. The Bureau's Consumer Credit Card Market Report identified prime range as 660–719 and super prime at 720 and above. Bureau of Consumer Fin. Prot., *The Consumer Credit Card Market* (Aug. 2019), *https://files.consumerfinance.gov/f/documents/cfpb_consumer-credit-card-market-report_2019.pdf.* Consumer credit data published on the Bureau's website identified prime range as 620 to 719 and super prime at 720 and above. Bureau of Consumer Fin. Prot., *Borrower Risk Profiles, https://www.consumerfinance.gov/data-research/consumer-credit-trends/student-loans/borrower-risk-profiles/#:~:text=Subprime%20(credit%20scores%20of%20580,scores%20of%20720%20or%20above)* (last visited Nov. 12, 2020).

[26] This is also true for borrowers with high interest rate private loans. U.S. Dep't of Treasury, *Opportunities and Challenges in Online Marketplace Lending,* at 9, 14–19 (May 10, 2016), *https://home.treasury.gov/system/files/231/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf.*

[27] DBRS, *Commentary, DBRS Student Loan ABS Quarterly Update,* at 7 (July 2017), *https://lending-times.com/wp-content/uploads/2017/07/DBRS-Student-Loan-ABS-Update-Commentary-8.pdf.*

[28] Navient 2020 2nd Quarter Investor Deck, slide 7 (Aug. 6, 2020), *https://navient.com/assets/about/investors/webcasts/2020-Q2-Investor-Slides-Final.pdf.*

[29] The preliminary estimate for in-school student loan originations for the 2019–20 academic year is $14.4 billion. The total for the 2018–19 academic year was $13.3 billion. College Bd., *Trends in College Pricing and Student Aid 2020* (Oct. 2020), *https://research.collegeboard.org/pdf/trends-college-pricing-student-aid-2020.pdf.* Navient 2020 2nd Quarter Investor Deck (Aug. 6, 2020), *https://navient.com/assets/about/investors/webcasts/2020-Q2-Investor-Slides-Final.pdf.*

[30] *See* 12 CFR 1026.46, 1026.48(a) through (f).

[31] 15 U.S.C. 1603(3).

[32] For example, the required prominence of the annual percentage rate disclosure differs between private education loans and installment loans. Regulation Z requires that installment loan disclosures display the terms ''finance charge'' and ''annual percentage rate'' more conspicuously than any other disclosure, except the creditor's identity. By contrast, in the private education loan disclosures under Regulation Z, the term ''annual percentage rate'' and the corresponding percentage rate must be less conspicuous than the term ''finance charge,'' the interest rate, and the notice of the right to cancel. 12 CFR 1026.17(a)(2).

[33] Public Law 110–315, 122 Stat. 3078 (2008).

[34] 15 U.S.C. 1650(b) and 12 CFR 1026.46.

[35] 15 U.S.C. 1650(d) and 12 CFR 1026.48(a).

[36] A creditor must give a borrower 30 days after a private education loan application is approved to decide whether to accept the loan. During that time, the creditor may not change the rates or terms of the offer, except in limited circumstances. *See* 15 U.S.C. 1650(d) and 12 CFR 1026.48(c).

[37] This is a non-exhaustive list of requirements and protections for private education loans under Regulation Z. *See* 12 CFR 1026.48. In addition, TILA contains some limitations concerning its applicability to private education loans. *See, e.g.,* 15 U.S.C. 1650(b) and (d).

[38] Section 1100E(a)(1): Section 104(3) of the Truth in Lending Act (15 U.S.C. 1603(3)) is amended by striking ''$25,000'' and inserting ''$50,000.''

[39] HOEPA section 1022, 122 stat. 3488 (titled ''Application of Truth in Lending Act to All Private Education Loans'').

[40] 15 U.S.C. 1650(a)(8)(A)(ii). Regulation Z, at 12 CFR 1026.46(b)(5) adopts similar language but replaces ''borrower'' with ''consumer'' and provides that the express purpose of the loan may be ''in whole or in part'' for postsecondary educational expenses. For ease of reading, the remainder of this advisory opinion will use the statutory phrasing, unless explicitly referencing Regulation Z, in which case the quotation, ''expressly [ ] for postsecondary educational expenses'' will be used. TILA and Regulation Z include other requirements not relevant here, such as that the loan does not include an open-ended extension of credit or a loan secured by real property.

[41] 12 CFR part 1026, supp. I, comment 46(b)(5)(1).

expenses''?[42] TILA is silent on the question, and the courts have not considered it. The commentary to Regulation Z states that the phrase ''extended expressly [ ] for postsecondary educational expenses'' includes ''loans extended to consolidate a consumer's pre-existing *private* education loans,''[43] but it does not address loans that consolidate existing *Federal* education loans, nor does it refer to loans that refinance a single existing loan, whether private or Federal.

With respect to consolidation loans, the Bureau believes that TILA and Regulation Z are ambiguous as to whether a loan that consolidates existing Federal education loans is issued or extended ''expressly for postsecondary educational expenses to a borrower.'' In other words, it is ambiguous whether the educational purpose of the underlying loans is transferred to the consolidation loan, or if instead the express purpose of the consolidation loan is to manage existing debt, benefit from more favorable interest rates, or some other purpose. The commentary to Regulation Z resolves this ambiguity only for loans consolidating existing *private* education loans.

The Bureau believes that the best reading of TILA and Regulation Z is that a loan that consolidates Federal loans or a loan that refinances a Federal loan incurred expressly for postsecondary educational expenses is, itself, ''expressly for postsecondary educational expenses.'' Borrowers apply for these loans explicitly to consolidate loans that were originated expressly for postsecondary educational expenses, and a creditor issues them pursuant to an explicit understanding that they will be used to satisfy debt incurred expressly for postsecondary educational expenses. Thus, these loans, from the perspective of both the borrower and the creditor, are ''expressly for'' postsecondary education expenses.[44] Additionally, Congress included the term ''borrower'' (and the Board included the term ''consumer'') in its definition of ''private education loan,'' instead of referring solely to a ''student,'' as in other sections of TILA.[45] This choice suggests that the statute can best be implemented by construing ''private education loan'' to include loans originated to consumers other than those currently in school, such as former students.[46]

This reading also best implements one of the general purposes of TILA, which Congress amended in HEOA, ''to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him and avoid the uninformed use of credit.''[47] Prior to HEOA, borrowers seeking credit relating to postsecondary educational expenses would receive comprehensive disclosures if they were seeking Federal loans originated pursuant to title IV of the Higher Education Act of 1965,[48] but they would not receive even ordinary TILA disclosures for education loans over $25,000.[49] As a result, pre-HEOA borrowers were less able to compare their options. But with the TILA amendments in HEOA, Congress made more robust comparisons possible for all ''private education loans,'' regardless of their size.

Additionally, this reading is most consistent with the statement in the Regulation Z commentary that ''loans extended to consolidate a consumer's pre-existing private education loans'' are themselves private education loans originated ''expressly [ ] for postsecondary educational purposes.'' Nothing in the text of TILA or Regulation Z supports concluding that private education loans retain their purpose as ''expressly for postsecondary educational expenses'' when they are consolidated but that Federal education loans originated for the same expenses do not.[50]

The Bureau also does not believe that the Comment's specific mention of ''pre-existing *private* education loans'' precludes the interpretation that consolidated pre-existing Federal loans are covered. The Board issued the commentary to Regulation Z, which interpreted the term ''private education loan,'' in 2009.[51] As discussed in the Background section, while there was a small market for consolidating private education loans in 2009, the private market for consolidation of Federal loans did not emerge until 2012. The Board did not receive any comments on its proposed rule that indicated the existence of such a market and no commenters sought clarity on the application of the proposed rule to Federal education loan consolidations.[52] Additionally, the relevant Comment to Regulation Z indicates that it is intended to be illustrative rather than exhaustive because it states that ''[t]he term *includes*'' loans consolidating private loans as well as loans extended for expenses incurred while the student is enrolled.[53]

The above analysis addressing the *consolidation* of multiple Federal education loans also applies to loans that *refinance* a single pre-existing loan that was originated expressly for

[42] TILA defines ''postsecondary educational expenses'' as ''any of the expenses that are included as part of the cost of attendance of a student, as set forth in the Higher Education Act of 1965.'' That Act, in turn, defines those expenses by providing a lengthy and detailed list of expenses, including a broad range of items such as tuition and fees, books and supplies, room and board, and some dependent care expenses, among others. 20 U.S.C. 1087*ll.*

[43] 12 CFR part 1026, supp. I ¶ 46(b)(5)–1 (emphasis added).

[44] The Bureau believes that the word ''for'' incorporates a broad understanding of the purpose of the loan. *See generally Merriam-Webster Dictionary* (defining ''for'' as indicating ''purpose,'' ''an intended goal,'' or ''the object or recipient of a perception, desire, or activity''). Congress and the Board could have, but did not, use narrower language that would focus more precisely on the initial transaction between the borrower and the educational institution regarding those expenses. Congress and the Board also could have, but did not, include refinancings and consolidations among the exclusions to ''private education loans'' that are enumerated in 15 U.S.C. 1650(a)(7)(B) and 12 CFR 1026.46(b)(5)(iii)–(iv).

[45] *See, e.g.,* 15 U.S.C. 1650(a)(9).

[46] *See* Norman J. Singer & Shambie Singer, Sutherland Statutes and Statutory Construction § 46:6 (7th ed. 2020) (stating that the omission of the same term or phrase from a similar section demonstrates a different legislative intent). This word could be read to mean that subpart F applies to loans taken out by parents or other non-students, at the time period when the borrower is in school.

[47] 15 U.S.C. 1601(A).

[48] *See, e.g.,* 20 U.S.C. 1087e; 34 CFR 685.202; Fed. Student Aid, U.S. Dep't of Educ., *Sample Master Promissory Notes, https://ifap.ed.gov/sites/default/files/attachments/2019-07/DLMPNsandComms.pdf* (last visited Nov. 18, 2020); Fed. Student Aid, U.S. Dep't of Educ., *Understand how interest is calculated and what fees are associated with your federal student loan, https://studentaid.gov/understand-aid/types/loans/interest-rates* (last visited Nov. 18, 2020); Fed. Student Aid, U.S. Dep't of Educ., *Federal Student Aid: Choose the federal student loan repayment plan that's best for you, https://studentaid.gov/manage-loans/repayment/plans* (last visited Nov. 18, 2020).

[49] 15 U.S.C. 1603(3). As noted above, the Dodd-Frank Act raised the TILA exemption threshold to $50,000.

[50] Because the definition of ''private education loan'' requires that the loan is not made, insured, or guaranteed under title IV, the Bureau does not believe the general exclusion for title IV loans in TILA and Regulation Z is relevant to the analysis. *See* 15 U.S.C. 1603(7), 12 CFR 1026.3(b)(1)(i)(B).

[51] TILA mandated that the Board prescribe regulations to carry out the purposes of the statute. 15 U.S.C. 1604(a); 12 CFR part 1026, supp. I, comment 46(b)(5)(1). The Bureau itself adopted these regulations and the accompanying commentary without substantive change in an interim final rule, later finalized in 2017. *See* 81 FR 25323 (Apr. 28, 2016). Additionally, when the Bureau reissued the rule and commentary via an interim final rule in 2011, it merely reflected the transfer of authority to the Bureau; the Bureau did not make any substantive changes either at that time or when the Bureau finalized its interim final rule in 2017. *See generally* 76 FR 79768, 79769 (Dec. 22, 2011) and 81 FR 252323, 25324 (Apr. 28, 2016).

[52] *See generally* 74 FR 41194, 41201–09 (Aug. 14, 2009).

[53] 12 CFR part 1026, supp. I ¶ 46(b)(5)–1 (emphasis added).

postsecondary education expenses, regardless of whether the pre-existing loan was a private or Federal loan. While the commentary refers only to consolidation of multiple pre-existing loans, the commentary is not intended to be exhaustive,[54] and the Bureau does not believe there is any principled reason to conclude that the postsecondary education purpose of multiple loans may transfer to a new loan, while the postsecondary purpose of a single loan transferred to a new loan may not.[55]

Accordingly, the Bureau interprets the commentary's reference to loans that ''consolidate a consumer's pre-existing private education loans'' as simply referencing the type of consolidation loan that existed at the time the commentary was issued by the Board. Thus, for the reasons discussed in this advisory opinion, the Bureau interprets the phrase ''expressly for postsecondary educational expenses'' to include loans that either consolidate Federal education loans that were themselves originated expressly for postsecondary education expenses or to refinance a single private or Federal education loan that was originated for such purpose.

As a result, these consolidation or refinance loans are covered under the term ''private education loan'' in TILA and Regulation Z and are therefore subject to TILA and Regulation Z's requirements in subpart F (including Regulation Z's disclosures, prohibition on co-branding, 30-day rumination period, and a right to cancel).

II. Regulatory Matters

This advisory opinion is an interpretive rule issued under the Bureau's authority to interpret TILA and Regulation Z, including under section 1022(b)(1) of the Dodd-Frank Act Wall Street Reform and Consumer Protection Act,[56] which authorizes guidance as may be necessary or appropriate to enable the Bureau to administer and carry out the purposes and objectives of Federal consumer financial laws.[57]

By operation of TILA section 130(f), no provision of TILA sections 130, 108(b), 108(c), 108(e), or 112 imposing any liability applies to any act done or omitted in good faith in conformity with this interpretive rule, notwithstanding that after such act or omission has occurred, the interpretive rule is amended, rescinded, or determined by judicial or other authority to be invalid for any reason.[58]

As an interpretive rule, this advisory opinion is exempt from the notice-and-comment rulemaking requirements of the Administrative Procedure Act.[59] Because no notice of proposed rulemaking is required, the Regulatory Flexibility Act does not require an initial or final regulatory flexibility analysis.[60] The Bureau has also determined that this advisory opinion does not impose any new or revise any existing recordkeeping, reporting, or disclosure requirements on covered entities or members of the public that would be collections of information requiring approval by the Office of Management and Budget under the Paperwork Reduction Act.[61]

Pursuant to the Congressional Review Act,[62] the Bureau will submit a report containing this interpretive rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to the rule's published effective date. The Office of Information and Regulatory Affairs has designated this interpretive rule as not a ''major rule'' as defined by 5 U.S.C. 804(2).

III. Signing Authority

The Director of the Bureau, Kathleen L. Kraninger, having reviewed and approved this document, is delegating the authority to electronically sign this document to Grace Feola, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

Dated: November 30, 2020.

Grace Feola,

Federal Register Liaison, Bureau of Consumer Financial Protection.

[FR Doc. 2020–26662 Filed 12–9–20; 8:45 am]

BILLING CODE 4810–AM–P

BUREAU OF CONSUMER FINANCIAL PROTECTION

12 CFR Part 1026

Truth in Lending (Regulation Z); Earned Wage Access Programs

AGENCY: Bureau of Consumer Financial Protection.

ACTION: Advisory opinion.

SUMMARY: The Bureau of Consumer Financial Protection (Bureau) is issuing this advisory opinion to resolve regulatory uncertainty regarding the applicability of the definition of credit under Regulation Z, which implements the Truth in Lending Act (TILA), to certain earned wage access (EWA) programs that conform to the summary of material facts provided in part I.B of this advisory opinion.

DATES: This advisory opinion is effective on December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Edward Blatnik, Acting Assistant Director; Will Wade-Gery, Senior Advisor; or Nathalie Prescott, Attorney; Office of Innovation, at *officeofinnovation@cfpb.gov* or 202–435–7000. If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

SUPPLEMENTARY INFORMATION: The Bureau is issuing this advisory opinion through the procedures for its Advisory Opinions Policy.[1] Refer to those procedures for more information.

I. Advisory Opinion

A. Background

According to the Bureau of Labor Statistics, nearly two-thirds of U.S. private businesses use biweekly, semimonthly, or monthly pay periods.[2] The Bureau understands that the interval of time between hours worked and receiving a paycheck can contribute to employees' financial distress, particularly for new hires when the length of time between the first day of employment and the first paycheck may be longer than subsequent paycheck intervals, depending on where the hire date falls in a pay cycle. A study by the Financial Health Network found that 38 percent of respondents cited timing mismatches between income and expenses as a reason for using short-term, small-dollar credit.[3]

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[54] *See also* 12 CFR part 1026, Supp. I, introduction comment 3(a) (''Rules of construction. Lists that appear in the commentary may be exhaustive or illustrative; the appropriate construction should be clear from the context. In most cases, illustrative lists are introduced by phrases such as 'including, but not limited to,' 'among other things,' 'for example,' or 'such as.' '').

[55] 12 CFR part 1026, supp. I ¶ 46(b)(5)–1.

[56] Public Law 111–203, 124 Stat. 1376 (2010).

[57] 12 U.S.C. 5512(b)(1).

[58] 15 U.S.C. 1640(f).

[59] 5 U.S.C. 553(b).

[60] 5 U.S.C. 603(a), 604(a).

[61] 44 U.S.C. 3501 *et seq.*

[62] 5 U.S.C. 801 *et seq.*

[1] Bureau of Consumer Fin. Prot., *Advisory Opinions Policy* (Nov. 2020), *https://files.consumerfinance.gov/f/documents/cfpb_advisory-opinion_policy_2020-11.pdf.*

[2] Bureau of Labor Statistics, *Length of Pay Periods in the Current Employment Statistics Survey* (last modified Aug. 29, 2019), *https://www.bls.gov/ces/publications/length-pay-period.htm.*

[3] Rob Levy & Joshua Sledge, Ctr. for Fin. Serv. Innovation, *A Complex Portrait: An Examination of Small-Dollar Credit Consumers,* at 6 (2012), *https://s3.amazonaws.com/cfsi-innovation-files/wp-content/uploads/2017/01/31163518/A-Complex-Portrait-An-Examination-of-Small-Dollar-Credit-Consumers.pdf.* (Center for Financial Services Innovation became the Financial Health Network in 2019, check the Fin. Health Network's about page, *https://finhealthnetwork.org/about/* (last visited Nov. 16, 2020).)

Despite advancements in payment technologies over the past several decades, several obstacles prevent businesses from easily implementing shorter pay cycles. For instance, there may be cash flow limitations on businesses that depend on incoming payments and receivables, which subsequently need to be processed and deposited.[4] The Bureau has noted that periodic wage payment ''appears to be largely driven by efficiency concerns with payroll processing and employers' cash management.''[5] Employers may also face a lack of technical ability and regulatory uncertainty about State wage and hour laws as contributing factors.[6]

Earned wage access products have recently emerged in the marketplace as an innovative way for employees to meet short-term liquidity needs that arise between paychecks without turning to more costly alternatives like traditional payday loans. EWA products seek to address the lag between consumers' hours worked and receipt of their paychecks by facilitating advance access to earned but as yet unpaid wages. EWA providers are developing programs with a variety of business models and fee structures. Typically, these programs involve an EWA provider enabling employees to request a certain amount (or share) of accrued wages, disbursing the requested amounts to the employees prior to payday, and later recouping the funds through payroll deductions or bank account debits on the subsequent payday.

The Bureau understands that there is uncertainty about the application of Regulation Z to EWA programs. Specifically, the Bureau has been asked whether EWA providers are offering or extending ''credit'' within the scope of the regulation.[7] The Bureau itself has acknowledged that there is uncertainty concerning the conditions under which EWA programs involve an offer of ''credit'' under Regulation Z.[8]

On November 30, 2020, the Bureau issued its Advisory Opinions Policy, the primary purpose of which ''is to provide a formal mechanism through which the Bureau may more effectively carry out its statutory purposes and objectives by better enabling compliance in the face of regulatory uncertainty.''[9]

The Bureau is issuing this advisory opinion under the Advisory Opinion Policy to resolve regulatory uncertainty regarding the application of Regulation Z to the particular type of EWA program described in the Summary of Material Facts in part I.B below (Covered EWA Program). Specifically, this advisory opinion clarifies that a Covered EWA Program does not involve the offering or extension of ''credit'' as defined by section 1026.2(a)(14) of Regulation Z.[10]

B. Summary of Material Facts

For purposes of this advisory opinion, the term ''Covered EWA Program'' means an EWA program that includes all of the following characteristics:[11]

(1) The provider of the Covered EWA Program (Provider) contracts with employers to offer and provide Covered EWA Transactions[12] to the employer's employees.

(2) The amount of each Covered EWA Transaction does not exceed the accrued cash value of the wages the employee has earned up to the date and time of the transaction, which amount is determined based upon timely information provided by the employer to the Provider. The Provider may not rely upon information provided by the employee, or on estimates or predictions of hours worked or hourly wage rates. The ''accrued cash value of the wages'' are wages that the employee is entitled to receive under State law in the event of separation from the employer for work performed for the employer, but for which the employee has yet to be paid.

(3) The employee makes no payment, voluntary or otherwise, to access EWA funds or otherwise use the Covered EWA Program, and the Provider or its agents do not solicit or accept tips or any other payments from the employee. (The Bureau notes that there may be EWA programs that charge nominal processing fees—and thus differ from the fee structure described in this section B(3)—that nonetheless do not involve the offering or extension of ''credit'' as defined in § 1026.2(a)(14). Such programs are not covered by this advisory opinion, but providers of such programs may request clarification from the Bureau about a specific fee structure by, for instance, applying for an Approval under the Policy on the Compliance Assistance Sandbox).[13]

To conform to this characteristic, the Provider must provide EWA funds to an account of the employee's choice, and the Provider cannot charge fees for the delivery of EWA funds to that account. If the employee chooses a prepaid account as defined under Regulation E[14] and that account is managed, issued, or otherwise facilitated by the Provider (Provider Account), the Provider cannot charge fees for opening that Provider Account. In addition, the Provider Account must allow the employee reasonable use of that account at no charge. In this context, ''reasonable use'' means, *inter alia,* that any prepaid card associated with the Provider Account must be issued on a major network brand that permits use at multiple, unaffiliated merchants; the Provider Account must not charge fees for use of an associated card to buy goods or services at merchants that accept the associated card; the Provider Account must not impose any periodic fees; and the employee must have some free and reasonably accessible means to obtain cash from the Provider Account.[15]

(4) The Provider recovers the amount of each Covered EWA Transaction only through an employer-facilitated payroll deduction from the employee's next paycheck.[16] One additional payroll

[4] *See* Jose Pagliery, *Why do we get paid every two weeks instead of daily?,* CNN Bus. (Feb. 10, 2016), *http://money.cnn.com/2016/02/10/technology/daily-paychecks/index.html; see also* Julian Alcazar & Terri Bradford, *In the Nick of Time: The Rise of Earned Wage Access,* Fed. Reserve Bank of Kan. City, at 4 (Sept. 2020), *https://www.kansascityfed.org/publications/research/rwp/psrb/articles/2020/rise-earned-wage-access* (''Payroll providers often cite costs, both financial and time, as the reason they are unable to pay employees more frequently.'').

[5] *See* 82 FR 54472, 54547 (Nov. 17, 2017).

[6] *See* David S. Mitchell, The Aspen Inst., *Payroll Innovation: How Smarter, Faster Paychecks Could Mitigate Volatility,* at 5–6 (May 2017) (''When employers—as well as workers themselves—decide they want to access their pay earlier and faster, they must turn to the technical experts—financial service and payroll providers—to operationalize the new policy.'').

[7] 12 CFR 1026.2(a)(14).

[8] 82 FR 54472, 54547 (Nov. 17, 2017).

[9] Bureau of Consumer Fin. Prot., *Advisory Opinions Policy* (Nov. 2020), *https://files.consumerfinance.gov/f/documents/cfpb_advisory-opinion_policy_2020-11.pdf.*

[10] The definition of ''credit'' in TILA is virtually identical to Regulation Z's definition of the term. *See* 15 U.S.C. 1602(f). Although this advisory opinion focuses on Regulation Z and concludes that its definition of ''credit'' does not apply to Covered EWA Programs, for similar reasons the Bureau clarifies that the same analysis applies to TILA's definition of ''credit'' and thus that Covered EWA Programs do not involve the offering or extension of ''credit'' under TILA.

[11] This advisory opinion is limited in its application to Covered EWA Programs. It has no application to EWA programs that are not Covered EWA Programs as described in this part I.B. As a result, products that meet some but not all of the characteristics may be credit under Regulation Z.

[12] The term ''Covered EWA Transaction'' means the transactions between a Provider and an employee that are associated with a Covered EWA Program.

[13] *See* 84 FR 48246 (Sept. 13, 2019).

[14] 12 CFR 1005.2(b)(3).

[15] The Provider Account may charge the employee, at cost, for non-standard uses of the Provider Account or associated card, such as foreign ATM use, card replacement, check provision, or directing ACH payments from the Provider Account.

[16] EWA programs where a provider obtains any authorization to transfer funds from a consumer's

Continued

deduction may be attempted in the event of a failed or partial payroll deduction due to administrative or technical errors. Administrative or technical errors include, for instance, an application programming interface (API) malfunction or a mistake in the employer's payroll process (*e.g.,* miscalculation of an employee's base pay or overtime award), but do not include, for instance, situations in which the employer has garnished an employee's wages following a Covered EWA Transaction.[17]

(5) In the event of a failed or partial payroll deduction, the Provider retains no legal or contractual claim or remedy, direct or indirect, against the employee, although the Provider may choose to refrain from offering the employee additional EWA transactions.

(6) Before entering into a Covered EWA Transaction, the Provider clearly and conspicuously explains to the employee, and warrants to the employee as part of the contract between the parties (and ultimately complies with these warranties) that it:

(a) Will not require the employee to pay any charges or fees in connection with the Covered EWA Transaction;

(b) Has no legal or contractual claim or remedy, direct or indirect, against the employee in the event the payroll deduction is insufficient to cover the full amount of a Covered EWA Transaction, including no right to take payment from any consumer account; and

(c) Will not engage in any debt collection activities related to a Covered EWA Transaction, place a Covered EWA Transaction amount as a debt with or sell it to a third party, or report to a consumer reporting agency concerning a Covered EWA Transaction.

(7) The Provider will not directly or indirectly assess the credit risk of individual employees, including through obtaining and reviewing credit reports or credit scores about the individual employees.

C. Legal Analysis

Regulation Z applies to any non-exempt[18] individual or business that offers or extends credit when four conditions are met: (i) The credit is offered or extended to consumers; (ii) the offering or extension of credit is done regularly; (iii) the credit is subject to a finance charge or is payable by a written agreement in more than four installments; and (iv) the credit is primarily for personal, family, or household purposes.[19] Section 1026.2(a)(14) of Regulation Z defines ''credit'' as ''the right to defer payment of debt or to incur debt and defer its payment.''[20] Neither Regulation Z nor TILA define the term ''debt.''

It is unclear whether the term ''credit'' in section 1026.2(a)(14) of Regulation Z includes Covered EWA Transactions.[21] For the reasons set forth below, the Bureau concludes that Covered EWA Transactions are not ''credit'' for purposes of § 1026.2(a)(14).

First, the Bureau concludes that Covered EWA Transactions do not provide employees with ''the right to defer payment of debt or to incur debt and defer its payment'' because Covered EWA Programs do not implicate a ''debt.''[22] Regulation Z does not define ''debt.'' The common meaning of the term debt is a ''[l]iability on a claim; a specific sum of money due by agreement or otherwise.''[23] But the Bureau has determined that no such liability of the employee arises in the context of a Covered EWA Program. Rather, the Bureau believes that a Covered EWA Program facilitates employees' access to wages they have already earned, and to which they are already entitled, and thus functionally operates like an employer that pays its employees earlier than the scheduled payday.[24] For instance, a Provider must have knowledge, from timely information the Provider receives from the employer, of the accrued cash value of an employee's wages at the date and time of the Covered EWA Transaction. The Covered EWA Transaction cannot be more than this amount, which reduces the risk that EWA funds do not correspond to funds the employee has actually earned and is entitled to receive on payday. Further, a Provider can recover EWA funds, directly or indirectly, only through an employer-facilitated payroll deduction that occurs on the next scheduled payday,[25] which corresponds to the pay period when the employee actually earned the funds related to the Covered EWA Transaction.[26] In addition, EWA funds are transferred to an employee's chosen account at no cost to the employee, just as receiving a paycheck costs employees nothing. And the only eligibility criterion for an employee to participate in a Covered EWA Program is whether the partner employer gives the employee access to the program; the Provider does not directly or indirectly assess an employee's credit risk for a Covered EWA Transaction, just as underwriting is not used to issue a paycheck.

Second, interpreting § 1026.2(a)(14) not to apply to Covered EWA Transactions is consistent with comment 2(a)(14)–1.v to Regulation Z. This comment provides ''[b]orrowing against the accrued cash value of an insurance policy or a pension account if there is no independent obligation to repay'' is ''not considered credit for purposes of the regulation.''[27] As the Board of Governors of the Federal Reserve System explained when it revised Regulation Z to implement the Truth in Lending Simplification and Reform Act, in such instances, ''credit has not been extended because the consumer is, in effect, only using the consumer's own money.''[28] The Bureau

account, including both electronic payment authorizations and checks and including authorizations that the provider may not actually utilize, do not meet the requirements of this section B(4).

[17] For example, a Covered EWA Transaction may occur in week one of an employee's pay cycle, but the employer learns of and subjects the employee's paycheck to a required wage garnishment in week two of the pay cycle. As a result of the garnishment, the employee's paycheck is less than the amount of the Covered EWA Transaction.

[18] The Bureau's Regulation Z does not apply to ''a person excluded from coverage of this part by section 1029 of the Consumer Financial Protection Act of 2010, title X of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111–203, 124 Stat. 1376.'' 12 CFR 1026.1(c)(1).

[19] 12 CFR 1026.1(c)(1).

[20] 12 CFR 1026.2(a)(14). TILA defines ''credit'' as ''the right granted by a creditor to a debtor to defer payment of debt or to incur debt and defer its payment.'' 15 U.S.C. 1602(f).

[21] The Board of Governors of the Federal Reserve System recognized that, ''while the concept of credit is central to Truth in Lending, the regulatory definition may be difficult to apply in particular fact situations . . . [A] precise, easy-to-apply standard cannot be devised to resolve all questions.'' 45 FR 80648, 80652 (Dec. 5, 1980) (proposing revisions of Regulation Z); *see also* 46 FR 20848, 20851 (Apr. 7, 1981) (adopting the definition from the December proposal and noting that ''[t]he regulatory definition may be difficult to apply in particular fact situations'').

[22] 12 CFR 1026.2(a)(14).

[23] *Debt, Black's Law Dictionary* (11th ed. 2019).

[24] This often occurs in the employer-employee context, for instance, when an individual whose employment has been terminated receives her final paycheck via paper check on her last day at work, which may not be the same day as a scheduled payday.

[25] *Cf.* 12 CFR part 1026, supp. I, comment 2(a)(14)–2 (''Credit includes a transaction in which a cash advance is made to a consumer in exchange for the consumer's personal check, or in exchange for the consumer's authorization to debit the consumer's deposit account, and where the parties agree either that the check will not be cashed or deposited, or that the consumer's deposit account will not be debited, until a designated future date.'').

[26] Payroll deductions may not be attempted in any other pay period in the event the paycheck corresponding to the Covered EWA Transaction is insufficient to cover the full amount of the transaction. However, in the event of a technical or administrative error, one additional payroll deduction may be attempted on the following payday.

[27] 12 CFR part 1026, supp. I, comment 2(a)(14)–1.

[28] 46 FR 20848, 20851 (Apr. 7, 1981) (''The regulatory definition [of 'credit'] may be difficult to

believes there are significant similarities between comment 2(a)(14)–1.v and a Covered EWA Program. For instance, like the accrued cash value of a consumer's insurance policy or pension account, the accrued cash value of an employee's earned but unpaid wages is the employee's own money. That is, an employee is ''in effect, only using the [employee's] own money'' when she accesses earned wages through a Covered EWA Program, and is not incurring debt or deferring its payment. Moreover, ''there is no independent obligation to repay'' a Covered EWA Transaction, since the Provider may only recover the corresponding EWA amounts via the allowed employer-facilitated payroll deduction (or in the event of an administrative or technical error, one additional employer-facilitated payroll deduction) and has no claim direct or indirect against an employee for nonpayment in the event of a failed or partial deduction.[29]

Third, the totality of circumstances of a Covered EWA Program supports that these programs differ in kind from products the Bureau would generally consider to be credit. Courts tend to agree that a transaction's substance, not its form, controls whether it qualifies as TILA ''credit,'' and they generally undertake fact-specific inquiries and weigh multiple factors when analyzing the true nature of a transaction.[30] The Bureau notes that features often found in credit transactions are absent from Covered EWA Programs. Unlike many credit transactions, for instance:

- Providers have no rights against the employee in the event of nonpayment. As explained above, a Provider must warrant to employees that it has no contractual claim or remedy, direct or indirect, against them in the event a payroll deduction is insufficient to cover amounts corresponding to a Covered EWA Transaction. A Provider also must warrant that it will not, with regard to any such transaction, engage in debt collection activities, report to consumer reporting agencies, or sell or place the transaction as a debt with any third party. Employees have no obligation to make any payments directly or indirectly to a Provider at any time. This is true even if, for instance, an employer goes bankrupt before attempting a payroll deduction.
- Providers do not charge employees to participate in a Covered EWA Program, open a Provider Account, transfer EWA funds to the Provider Account (or to the employee's choice of account), or use an associated card issued on a major network to buy goods or services at the multiple merchants that accept the card. And Provider Accounts must allow employees to have reasonable use of the accounts at no charge, which means, *inter alia,* that the Provider Account and associated card must not impose any periodic fees.[31]
- No interest or other fees are charged against a Covered EWA Transaction, ensuring that the amount the Provider is entitled to recover does not ''increase[ ] with the passage of time, another characteristic of a loan.'' [32] The absence of interest and other fees demonstrates that Providers are not taking on the type of credit risk characteristic of a typical credit transaction.
- There are no late fees or prepayment penalties associated with a Covered EWA Transaction.
- Providers do not take any payment authorization from employees, such as a check, ACH, or debit card authorization.
- Providers do not pull credit reports or credit scores on individual employees or otherwise assess their credit risk.
- Providers do not report information concerning Covered EWA Transactions to consumer reporting agencies.
- Providers do not engage in debt collection activities related to Covered EWA Transactions or place such amounts as debt with, or sell such amounts to, any third party.

Finally, the Bureau notes that its interpretation of § 1026.2(a)(14) in the context of a Covered EWA Program is consistent with the Bureau's discussion of these types of products in its 2017 Payday Lending Rule, where it noted that ''some efforts to give consumers access to accrued wages may not be credit at all. For instance, when an employer allows an employee to draw accrued wages ahead of a scheduled payday and then later reduces the employee's paycheck by the amount drawn, there is a quite plausible argument that the transaction does not involve 'credit' because the employee may not be incurring a debt at all.'' [33] The Bureau stated that it ''is aware that some of these products provide access to the consumer's own funds in the form of earned wages already accrued but not yet paid out because of administrative and payroll processes historically developed by employers.'' [34]

Similarly, Covered EWA Programs are designed to ''provide access to the consumer's own funds'' through Covered EWA Transactions that are limited to the accrued cash value of employee wages. Providers recover amounts corresponding to such transactions through payroll deductions and they retain no right to pursue claims against employees in the event of a failed or partial deduction.

apply in particular fact situations, and the Board therefore offers the following guidance, which will also be incorporated into the commentary.''); *see also* 46 FR 28560, 28560 (May 27, 1981) (proposing official Regulation Z commentary) (''The commentary does not purport to be exhaustive. It concentrates on material of general application whose inclusion will, in the staff's view, be useful to the widest possible audience . . . [T]he commentary will address prevalent credit transactions, to the extent that they present important questions under the regulation. It will not, however, attempt to address each credit plan's unique set of facts. The commentary instead identifies several basic factors characterizing that type of transaction. Creditors must then determine whether the discussion applies to their own transactions given their particular variations.''); 46 FR 50288, 50288 (Oct. 9, 1981) (adopting official Regulation Z commentary) (''The commentary modifies the staff's approach to providing interpretations of Regulation Z. Under the previous regulation, individual staff opinions were issued in response to inquiries about specific fact situations and were normally limited to those facts. Over time, more than 1,500 separate opinions were issued. While this commentary provides specific guidance and examples, it employs language of somewhat more general application for use by the widest possible audience.'').

[29] This could happen, for instance, if an employee's wages become subject to garnishment or an employer goes out of business after an EWA transaction but before the scheduled payday.

[30] *See Meyers* v. *Clearview Dodge Sales, Inc.,* 384 F. Supp. 722, 728 (E.D. La. 1974), *aff'd in part, rev'd in part,* 539 F.2d 511 (5th Cir. 1976), *cert. denied,* 431 U.S. 929 (1977) (''In construing a piece of remedial legislation such as the Truth-in-Lending Act, designed to protect consumers, courts must focus on the substance of a transaction rather than its mere form.''); *see also Edwards* v. *Your Credit, Inc.,* 148 F.3d 427, 436 (5th Cir. 1998) (applying substance-over-form analysis to TILA claim); *Arrington* v. *Colleen, Inc.,* No. Civ. AMD 00–191, 2001 WL 34117735, at *4 (D. Md. Mar. 29, 2001) (''A common task of courts is to determine whether particular conduct or transaction falls into a class of conduct or transactions that a statute regulates. Such is particularly the case here, where the TILA regulates the extension of credit in various forms and in fact anticipates that the form of credit will be ever-changing.'').

[31] The Provider may charge, at cost, for non-standard uses of the Provider Account or associated card as noted in part I.B.

[32] *Oasis Legal Fin. Group, LLC* v. *Coffman,* 361 P.3d 400, 410 (Colo. 2015) (noting in the context of the UCCC that ''growth in the repayment obligation over time is a finance charge and a hallmark of a consumer loan'').

[33] 82 FR 54472, 54547 (Nov. 17, 2017). The Bureau further noted that this ''is especially likely where the employer does not reserve any recourse upon the payment made to the employee other than the corresponding reduction in the employee's paycheck,'' but that other initiatives are more likely to constitute ''credit'' under Regulation Z. *Id.* ''For example, if an employer cannot simply reduce the amount of an employee's paycheck because payroll processing has already begun, there may be a need for a mechanism for the consumer to repay the funds after they are deposited in the consumer's account.'' *Id.*

[34] *Id.* at 54548. The Bureau contrasted this with ''other products [that] rely on estimates of wages likely to be accrued, or accrued on average, and may make advances against expected wages that are not already earned and accrued.'' *Id.*

This advisory opinion applies solely to the question of whether Covered EWA Programs (*i.e.,* those meeting all of the characteristics described in part I.B above) fall under the definition of credit in section 1026.2(a)(14) of Regulation Z identified above. This advisory opinion has no application to any other circumstance, and it does not offer a legal interpretation of any other provisions of law.

The Bureau continues to seek stakeholder feedback and evaluate whether the Bureau should provide any additional guidance (including through its advisory opinion and innovation policies) about the application of Regulation Z to EWA programs that differ from those described in part I.B above.

II. Regulatory Matters

This advisory opinion is an interpretive rule issued under the Bureau's authority to interpret TILA and Regulation Z, including under section 1022(b)(1) of the Dodd-Frank Act, which authorizes guidance as may be necessary or appropriate to enable the Bureau to administer and carry out the purposes and objectives of Federal consumer financial laws.[35]

By operation of TILA section 130(f), no provision of TILA sections 130, 108(b), 108(c), 108(e), or 112 imposing any liability applies to any act done or omitted in good faith in conformity with this interpretive rule, notwithstanding that after such act or omission has occurred, the interpretive rule is amended, rescinded, or determined by judicial or other authority to be invalid for any reason.[36]

As an interpretive rule, this advisory opinion is exempt from the notice-and-comment rulemaking requirements of the Administrative Procedure Act.[37] Because no notice of proposed rulemaking is required, the Regulatory Flexibility Act does not require an initial or final regulatory flexibility analysis.[38]

The Bureau has also determined that this advisory opinion does not impose any new or revise any existing recordkeeping, reporting, or disclosure requirements on covered entities or members of the public that would be collections of information requiring approval by the Office of Management and Budget under the Paperwork Reduction Act.[39]

Pursuant to the Congressional Review Act,[40] the Bureau will submit a report containing this interpretive rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to the rule's published effective date. The Office of Information and Regulatory Affairs has designated this interpretive rule as not a ''major rule'' as defined by 5 U.S.C. 804(2).

III. Signing Authority

The Director of the Bureau, Kathleen L. Kraninger, having reviewed and approved this document, is delegating the authority to electronically sign this document to Grace Feola, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

Dated: November 30, 2020.

Grace Feola,

Federal Register Liaison, Bureau of Consumer Financial Protection.

[FR Doc. 2020–26664 Filed 12–9–20; 8:45 am]

BILLING CODE 4810–AM–P

[35] 12 U.S.C. 5512(b)(1).

[36] 15 U.S.C. 1640(f).

[37] 5 U.S.C. 553(b).

[38] 5 U.S.C. 603(a), 604(a).

[39] 44 U.S.C. 3501 through 3521.

[40] 5 U.S.C. 801 *et seq.*

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–0542; Project Identifier AD–2020–00582–E; Amendment 39–21351; AD 2020–25–09]

RIN 2120–AA64

Airworthiness Directives; Pratt & Whitney Division Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Pratt & Whitney Division (PW) PW4164, PW4164–1D, PW4168, PW4168–1D, PW4168A, PW4168A–1D, and PW4170 model turbofan engines with a certain outer combustion chamber assembly and 3rd stage low-pressure turbine (LPT) duct segments installed. This AD was prompted by reports of damaged or failed 3rd stage LPT duct segments on PW engines with the Talon IIB outer combustion chamber assembly configuration installed. This AD requires removing and replacing certain 3rd stage LPT duct segments. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 14, 2021.

ADDRESSES: For service information identified in this final rule, contact Pratt & Whitney Division, 400 Main Street East, Hartford, CT 06118; phone: (800) 565–0140; email: *help24@pw.utc.com*; website: *https://fleetcare.pw.utc.com*. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238–7759. It is also available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0542.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0542; 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.

FOR FURTHER INFORMATION CONTACT: Carol Nguyen, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7655; fax: (781) 238–7199; email: *carol.nguyen@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 PW PW4164, PW4164–1D, PW4168, PW4168–1D, PW4168A, PW4168A–1D, and PW4170 model turbofan engines with a certain outer combustion chamber assembly and 3rd stage LPT duct segments installed. The NPRM published in the **Federal Register** on June 12, 2020 (85 FR 35812). The NPRM was prompted by multiple reports of damaged or failed 3rd stage LPT duct segments that resulted in engine surges, in-flight shutdowns, diversions, and air turnbacks. The reports were attributed to elevated gas path temperature at the outer diameter of the turbine flowpath and high-pressure turbine (HPT) 2nd stage blade outer air seal spallation, which led to the distortion and liberation of 3rd stage LPT duct segments. In the NPRM, the FAA proposed to require removing and replacing certain 3rd stage LPT duct segments. The FAA is issuing this AD

to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from two commenters. The commenters were Air Line Pilots Association, International (ALPA) and Delta Air Lines, Inc. (Delta). ALPA supported the proposal without change. Delta supported the proposal but recommended certain changes. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to the Revise Compliance or Definition

Delta requested that the FAA revise paragraph (g) of this AD to require replacement of duct segments that have operated with more than 2,500 cycles with a Talon IIB combustor. Alternatively, Delta requested the FAA revise paragraph (i) of this AD to define an ''engine shop visit'' as ''removal and disassembly of the HPT module.'' Delta noted several industry events have occurred related to the failure of 3rd stage LPT duct segments, also commonly called outer transition ducts (OTDs), on PW4000–100 engines with Talon IIB combustors. Prior information from the design approval holder indicates that industry failures have occurred only on parts that have operated more than 3,000 flight cycles with a Talon IIB combustor.

Delta further noted that paragraph (g) of the proposed rule would require that duct segments with certain part numbers be removed and replaced with new parts at every engine shop visit, defined in paragraph (i) as the ''induction of an engine into the shop for maintenance involving the separation of pairs of major mating flanges.'' Per this definition, engines with few cycles in service since prior OTD replacement would require installation of new hardware, even for minor repairs where maintenance of the LPT would not have otherwise been required.

Additionally, Delta commented that OTD replacement requires significant teardown of the LPT module, which will result substantial fallout and repair costs for unrelated hardware. Delta reasoned that the proposed rule would require repetitive replacement of low-time duct segments at substantial financial burden to achieve minimal risk reduction. Since industry experience has demonstrated duct segment liberation to occur on hardware above 3,000 flight cycles, Delta concluded that sufficient data should exist to establish an allowable service life that maintains an acceptable level of safety.

Delta also noted that while a cycle-based requirement would be preferable, defining an engine shop visit as ''removal and disassembly of the HPT module'' would maintain an acceptable level of safety. Delta commented that requiring replacement of low-time duct segments during minor repairs presents a substantial financial burden for minimal risk reduction.

The FAA disagrees with revising paragraph (g) or (i) of this AD. Requiring removal of the 3rd stage LPT duct segments at the next HPT overhaul does not adequately address the unsafe condition. The FAA's risk assessment assumed that the 3rd stage LPT duct segments would be replaced at every shop visit, which provides an acceptable level of safety. Operators may propose to the FAA an alternative method of compliance in accordance with paragraph (j) of this AD. The FAA did not change this AD.

Request To Require Removed Duct Segments be Discarded, Scrapped, or Mutilated

Delta requested that the FAA revise paragraph (g) of this AD to require that 3rd stage LPT duct segments that have been removed from service be discarded, scrapped, or mutilated. Delta reasoned that the rule would apply only to PW4000–100 engines with certain combustors, but the subject part numbers are certified for installation in other engine models. Delta expressed concern that without a requirement to discard or scrap the removed duct segments, they could potentially be installed in a PW4000–94 or non-Talon-IIB PW4000–100 engine or sold to an operator without knowledge of their prior operation with a Talon IIB combustor.

The FAA disagrees with Delta's request. When parts are removed from service due to an AD, they are unserviceable unless the AD specifies otherwise. Unserviceable parts are not airworthy and should be disposed of in a manner that does not allow them to be returned to service. Operators must ensure only serviceable parts are installed on engines before approving the aircraft for return to service. The FAA did not change this AD.

Request To Include Available Fleet Data

Delta requested that the FAA update the proposed rule to reflect the available fleet data, which shows that failure of 3rd stage LPT duct segments has only occurred after 3,000 cycles or greater in operation on engines with a Talon IIB combustor. Delta stated that the Discussion paragraph of the proposed rule does not provide prior service history of LPT duct segments that have failed in-service. Delta further noted that prior communications from the design approval holder indicate that industry failures occurred on parts that operated 3,000 flight cycles or more under exposure to the higher-than-expected temperatures with a Talon IIB combustor installed.

The FAA disagrees. The Discussion paragraph of the NPRM provides an adequate discussion of the failure in service of 3rd stage LPT duct segments. The FAA did not change this AD.

Request To Update Service Information

Delta requested that the FAA add PW Service Bulletin (SB) PW4G–100–72–220 to the Related Service Information paragraph of this AD. Delta noted that the accomplishment of SB PW4G–100–72–220 installs a Talon IIB combustor, and 3rd stage duct segments operated on a post-SB engine would be subject to the proposed rule as well.

The FAA agrees and has added PW SB PW4G–100–72–220 to the Related Service Information paragraph of this AD.

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.

Related Service Information

The FAA reviewed PW SB No. PW4G–100–72–214, dated December 15, 2011; PW SB No. PW4G–100–72–219, Revision 1, dated October 5, 2011; PW SB No. PW4G–100–72–253, dated November 24, 2014; and PW SB No. PW4G–100–72–220, Revision 4, dated September 30, 2011. PW SB No. PW4G–100–72–214 introduces the Talon IIB outer combustion chamber assembly that reduces the combustor exit temperature levels at the outer diameter of the combustor. PW SB No. PW4G–100–72–219 describes procedures for installing the Advantage70 engine upgrade kit to improve engine reliability and fuel consumption, and to reduce maintenance costs. PW SB No. PW4G–

100–72–253 describes procedures for replacing the outer combustion chamber assembly waspaloy nuts. PW SB PW4G–100–72–220 describes procedures for installing the Advantage70 engine upgrade kit to improve engine reliability and fuel consumption, reduce maintenance costs, and convert engine thrust rating.

Costs of Compliance

The FAA estimates that this AD affects 99 engines installed on 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
Remove and replace 3rd stage LPT duct segments.	56 work-hours × $85 per hour = $4,760	$85,000	$89,760	$8,886,240

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:

2020–25–09 Pratt & Whitney Division: Amendment 39–21351; Docket No. FAA–2020–0542; Project Identifier AD–2020–00582–E.

(a) Effective Date

This airworthiness directive (AD) is effective January 14, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Pratt & Whitney Division (PW) PW4164, PW4164–1D, PW4168, PW4168–1D, PW4168A, PW4168A–1D, and PW4170 model turbofan engines that have 3rd stage low-pressure turbine (LPT) duct segments, part number (P/N) 50N434–01 or P/N 50N450–01 installed, and have the Talon IIB outer combustion chamber assembly, P/N 51J500 or P/N 51J381, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by reports of damaged or failed 3rd stage LPT duct segments on PW engines with the Talon IIB outer combustion chamber assembly configuration installed. The FAA is issuing this AD to prevent failure of the 3rd stage LPT duct segments. The unsafe condition, if not addressed, could result in uncontained release of LPT blades and vanes, damage to the engine, and damage to the airplane.

(f) Compliance

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

(g) Required Action

At every engine shop visit after the effective date of this AD, remove from service the 3rd stage LPT duct segments, P/N 50N434–01 and P/N 50N450–01, and replace them with parts with zero flight cycles.

(h) Terminating Action

Removal of the 3rd stage LPT duct segments, P/N 50N434–01 and P/N 50N450–01, and their replacement with parts having P/Ns other than P/N 50N434–01 and P/N 50N450–01, constitutes terminating action for the repetitive replacement required by paragraph (g) of this AD.

(i) Definition

For the purpose of this AD, an ''engine shop visit'' is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges (lettered flanges). The separation of engine flanges solely for the purpose of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO 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 certification office, send it to the attention of the person identified in Related Information. You may email your request to: *ANE-AD-AMOC@faa.gov*.

(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) Related Information

For more information about this AD, contact Carol Nguyen, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7655; fax: (781) 238–7199; email: *carol.nguyen@faa.gov*.

(l) Material Incorporated by Reference

None.

Issued on December 2, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–26915 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–0586; Product Identifier 2020–NM–066–AD; Amendment 39–21306; AD 2020–22–10]

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) 2018–14–02, which applied to certain The Boeing Company Model 777–200, –200LR, –300, and –300ER series airplanes. AD 2018–14–02 required an inspection for foam insulation on the dripshield above the overhead panel support structure and replacement if necessary. For certain airplanes, AD 2018–14–02 also required replacement of foam insulation on the overhead panel support structure. This AD continues to require the actions in AD 2018–14–02, and, for certain airplanes, this AD requires an inspection of the foam insulation on the overhead panel support structure, and replacement if necessary. This AD was prompted by reports that additional areas of Boeing Material Specification (BMS) 8–39 flexible urethane foam were found on the overhead panel support structure in the flight compartment. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 14, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 14, 2021.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.* You may view this service information 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 on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0586.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0586; 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.

FOR FURTHER INFORMATION CONTACT: Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3584; email: *Julie.Linn@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2018–14–02, Amendment 39–19322 (83 FR 31650, July 9, 2018) (''AD 2018–14–02''). AD 2018–14–02 applied to certain The Boeing Company Model 777–200, –200LR, –300, and –300ER series airplanes. The NPRM published in the **Federal Register** on July 28, 2020 (85 FR 45357). The NPRM was prompted by reports that additional areas of BMS 8–39 flexible urethane foam were found on the overhead panel support structure in the flight compartment. The degradation of the foam over time increases the potential for an uncontrolled fire below the passenger compartment floor and other locations outside the areas covered by smoke detection and fire protection systems. The NPRM proposed to continue to require the actions in AD 2018–14–02, and, for certain airplanes, the NPRM also proposed to require an inspection of the foam insulation on the overhead panel support structure, and replacement if necessary. The FAA is issuing this AD to address BMS 8–39 flexible urethane foam found in certain areas of an airplane, which, if exposed to an ignition source, could cause loss of control of the airplane during a fire.

Comments

The FAA gave the public the opportunity to participate in developing this AD. The FAA has considered the comments received. Boeing and United Airlines indicated their support for the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related IBR Material Under 1 CFR Part 51

The FAA reviewed Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020. This service information describes procedures for removal and replacement of the foam on the overhead panel support structure; a general visual inspection for foam insulation on the dripshield above the overhead panel support structure; a detailed inspection for foam insulation on the overhead panel support structure; and replacement if necessary. This service information 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 132 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
Inspection and replacement of foam insulation (retained actions from AD 2018–14–02).	Up to 32 work-hours × $85 per hour = Up to $2,720.	$5,611	Up to $8,331	Up to $1,099,692.
Detailed inspection and replacement (new proposed action).	Up to 18 work-hours × $85 per hour = Up to $1,530.	$5,840	Up to $7,370	Up to $972,840.

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 has determined that 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.

Adoption of 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) 2018–14–02, Amendment 39–19322 (83 FR 31650, July 9, 2018), and

■ b: Adding the following new AD:

2020–22–10 The Boeing Company: Amendment 39–21306; Docket No. FAA–2020–0586; Product Identifier 2020–NM–066–AD.

(a) Effective Date

This AD is effective January 14, 2021.

(b) Affected ADs

This AD replaces AD 2018–14–02, Amendment 39–19322 (83 FR 31650, July 9, 2018) (''AD 2018–14–02'').

(c) Applicability

This AD applies to The Boeing Company Model 777–200, –200LR, –300, and –300ER series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports that additional areas of Boeing Material Specification (BMS) 8–39 flexible urethane foam were found on the overhead panel support structure in the flight compartment. The degradation of the foam over time increases the potential for an uncontrolled fire below the passenger compartment floor and other locations outside the areas covered by smoke detection and fire protection systems. The FAA is issuing this AD to address BMS 8–39 flexible urethane foam found in certain areas of an airplane, which, if exposed to an ignition source, could cause loss of control of the airplane during a fire.

(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 paragraph 1.E., ''Compliance,'' of Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020, do all applicable actions identified as ''RC'' (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020, uses the phrase ''the Revision 2 date of this service bulletin,'' this AD requires using ''the effective date of AD 2018–14–02.''

(2) For any Group 1 Configuration 3 airplane as identified in Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020, no action is required by this AD, provided that airplane remains in that configuration.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO 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 certification office, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: *9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.*

(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.

(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, Seattle ACO 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 previously for AD 2018–14–02 are approved as AMOCs for the corresponding provisions of Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020, that are required by paragraph (g) of this AD.

(5) For service information that contains steps that are labeled as Required for

Compliance (RC), the provisions of paragraphs (i)(5)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled ''RC Exempt,'' then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled 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 RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

For more information about this AD, contact Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3584; email: *Julie.Linn@faa.gov.*

(k) Material Incorporated by Reference

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

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

(i) Boeing Special Attention Service Bulletin 777–25–0621, Revision 2, dated February 28, 2020.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.*

(4) You may view this service information 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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fedreg.legal@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on October 19, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27005 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–0573; Product Identifier 2020–NM–078–AD; Amendment 39–21289; AD 2020–21–16]

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 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, 747SR, and 747SP series airplanes. This AD was prompted by a determination that the upper wing skin at engine nacelle points may be subject to undetected cracking. This AD requires repetitive ultrasonic inspections of the upper wing skin at certain engine strut positions for cracking; repetitive detailed and ultrasonic inspections of the strut lower spar fitting, diagonal brace strut end clevis, and diagonal brace wing attach end clevis for cracking; repetitive detailed inspections of lower link fitting at certain engine strut positions for cracking; and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 14, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 14, 2021.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.* You may view this service information 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 on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0573.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0573; 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.

FOR FURTHER INFORMATION CONTACT: Eric Lin, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3523; email: *eric.lin@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

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 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, 747SR, and 747SP series airplanes. The NPRM published in the **Federal Register** on June 30, 2020 (85 FR 39108). The NPRM was prompted by a determination that the upper wing skin at engine nacelle points may be subject to undetected cracking. The NPRM proposed to require repetitive ultrasonic inspections of the upper wing skin at certain engine strut positions for cracking; repetitive detailed and ultrasonic inspections of the strut lower spar fitting, diagonal brace strut end clevis, and diagonal brace wing attach end clevis for cracking; repetitive detailed inspections of lower link fitting at certain engine strut positions for cracking; and applicable on-condition actions.

The FAA is issuing this AD to address undetected cracking in the upper wing skin, strut lower spar fitting, or clevis lugs at either end of the diagonal brace and lower link fitting. This condition, if not addressed, could adversely affect the structural integrity of the engine strut and may lead to the separation of the strut to wing box assembly.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA has considered the comments received. Boeing stated that it concurred with the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related IBR Material Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019. The service information describes procedures for ultrasonic inspections of the upper wing skin at engine strut positions 1 through 4 for cracking; detailed and ultrasonic inspections of the strut lower spar fitting, diagonal brace strut end clevis, and diagonal brace wing attach end clevis for cracking; detailed inspections of lower link fitting at engine strut positions 1 through 4 for cracking; and applicable on-condition actions. On-condition actions include repair. This service information 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 125 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
Inspections	9 work-hours × $85 per hour = $765 per inspection cycle.	$0	$765 per inspection cycle	$95,625 per inspection cycle.

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions 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.

Adoption of 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 (AD):

2020–21–16 The Boeing Company: Amendment 39–21289; Docket No. FAA–2020–0573; Product Identifier 2020–NM–078–AD.

(a) Effective Date

This AD is effective January 14, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, 747SR, and 747SP series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a determination that the upper wing skin at engine nacelle attachment points may be subject to undetected cracking. The FAA is issuing this AD to address undetected cracking in the upper wing skin, strut lower spar fitting, or clevis lugs at either end of the diagonal brace and lower link fitting. This condition, if not addressed, could adversely affect the structural integrity of the engine strut and may lead to the separation of the strut to wing box assembly.

(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 747–57A2363 RB, dated December 23, 2019, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747–57A2363, dated December 23, 2019, which is referred to in Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019, uses the phrase ''the original issue date of Requirements Bulletin 747–57A2363

RB,'' this AD requires using ''the effective date of this AD.''

(2) Where Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019, specifies contacting Boeing for repair instructions: This AD requires doing the repair before further flight using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO 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 certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: *9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.*

(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.

(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, Seattle ACO 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.

(j) Related Information

(1) For more information about this AD, contact Eric Lin, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3523; email: *eric.lin@faa.gov.*

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 747–57A2363 RB, dated December 23, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.*

(4) You may view this service information 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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fedreg.legal@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on October 7, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27006 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–1105; Project Identifier MCAI–2020–01459–T; Amendment 39–21345; AD 2020–25–03]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2020–01–17, which applied to all Airbus SAS Model A318, A319, A320, and A321 series airplanes. AD 2020–01–17 required repetitive checks of the pressure gauges on the inflation reservoir of each emergency escape slide/raft to determine the amount of pressure and, depending on findings, accomplishment of applicable corrective actions. This AD retains the requirements of AD 2020–01–17, expands the list of affected parts to be checked, and provides optional terminating action for the repetitive checks; as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. This AD was prompted by the determination that certain parts that were not identified in AD 2020–01–17 are also subject to the unsafe condition. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective December 28, 2020.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 28, 2020.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of February 14, 2020 (85 FR 5310, January 30, 2020).

The FAA must receive comments on this AD by January 25, 2021.

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 *https://www.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.

For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this IBR material on the EASA website at *https://ad.easa.europa.eu.* You may view this IBR 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 in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1105.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1105; 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 AD, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Sanjay Ralhan, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3223; email *Sanjay.Ralhan@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued AD 2020–01–17, Amendment 39–19823 (85 FR 5310,

January 30, 2020) (AD 2020–01–17), which applied to all Airbus SAS Model A318, A319, A320, and A321 series airplanes. AD 2020–01–17 required repetitive checks of the pressure gauges on the inflation reservoir of each emergency escape slide/raft to determine the amount of pressure and, depending on findings, accomplishment of applicable corrective actions. The FAA issued AD 2020–01–17 to address insufficient reservoir pressure in an emergency escape slide/raft, which would prevent the deployment of the emergency escape slide/raft during an emergency, possibly resulting in injury to the occupants.

Actions Since AD 2020–01–17 Was Issued

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2020–0236, dated October 27, 2020 (EASA AD 2020–0236) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Airbus SAS Model A318 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, –153N, and –171N airplanes; Model A320–211, –212, –214, –215, –216, –231, –232, –233, –251N, –252N, –253N, –271N, –272N, and –273N airplanes; and Model A321 series airplanes. Model A319–153N and A320–215 airplanes are not certified 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.

This AD was prompted by a report that during airplane boarding a loud bang was heard. A subsequent inspection revealed that one emergency escape slide/raft was found with zero reservoir pressure, due to a burst rupture disk assembly in the inflation reservoir, which was probably caused by a manufacturing defect. This AD was also prompted by the determination that additional parts are subject to the unsafe condition, and by the availability of an optional terminating action for the repetitive checks. The FAA is issuing this AD to address insufficient reservoir pressure in an emergency escape slide/raft, which would prevent the deployment of the emergency escape slide/raft during an emergency, possibly resulting in injury to the occupants. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

EASA AD 2020–0236 describes procedures for repetitive checks of the pressure gauge on the inflation reservoir of each emergency escape slide/slide raft to determine the amount of pressure, and applicable corrective actions. The corrective actions include, among other things, replacement of any affected emergency escape slide/raft or inflation reservoir. EASA AD 2020–0236 also describes procedures for a modification or replacement of affected parts, which would eliminate the need for the repetitive pressure checks.

This AD also requires EASA AD 2019–0316, dated December 23, 2019, which the Director of the Federal Register approved for incorporation by reference as of February 14, 2020 (85 FR 5310, January 30, 2020).

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 the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI referenced above. The FAA is issuing this AD because the FAA has evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Requirements of This AD

This AD retains the requirements of AD 2020–01–17, and requires accomplishing the actions specified in EASA AD 2020–0236 described previously, as incorporated by reference, except for any differences identified as exceptions in the regulatory text of this AD. Accomplishment of the initial pressure check specified in EASA AD 2020–0236 terminates the requirements of AD 2020–01–17.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA initially worked with Airbus and EASA to develop a process to use certain EASA ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has since coordinated with other manufacturers and civil aviation authorities (CAAs) to use this process. As a result, EASA AD 2020–0236 is incorporated by reference in this AD. This AD, therefore, requires compliance with EASA AD 2020–0236 in its entirety, through that incorporation, except for any differences identified as exceptions in the regulatory text of this AD. Using common terms that are the same as the heading of a particular section in the EASA AD 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 the EASA AD. Service information specified in EASA AD 2020–0236 that is required for compliance with EASA AD 2020–0236 is available on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1105.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because if a rupture disk assembly in the inflation reservoir of an emergency escape slide/slide raft burst, it would result in a sudden loss of reservoir pressure and prevent the deployment of the emergency escape slide/raft during an emergency, possibly resulting in injury to the occupants. In addition, the compliance time for the required action is shorter than the time necessary for the public to comment and for publication of the final rule. Therefore, the FAA finds good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reasons stated above, the FAA finds that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this AD. Send your comments to an address under the **ADDRESSES** section. Include ''Docket No. FAA–2020–1105; Project Identifier MCAI–2020–01459–T'' at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, 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 final rule 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 *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

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 AD 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 AD, 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 AD. Submissions containing CBI should be sent to Sanjay Ralhan, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3223; email *Sanjay.Ralhan@faa.gov.* Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act (RFA)

The requirements of the RFA do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 1,680 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
1 work-hour × $85 per hour = $85	$0	$85	$142,800 per check.

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions 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

The FAA determined that 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, and

(2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

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

Adoption of 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) 2020–01–17, Amendment 39–19823 (85 FR 5310, January 30, 2020), and

■ b. Adding the following new AD:

2020–25–03 Airbus SAS: Amendment 39–21345; Docket No. FAA–2020–1105; Project Identifier MCAI–2020–01459–T.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 28, 2020.

(b) Affected ADs

This AD replaces AD 2020–01–17, Amendment 39–19823 (85 FR 5310, January 30, 2020) (AD 2020–01–17).

(c) Applicability

This AD applies to all Airbus SAS airplanes, certificated in any category, identified in paragraphs (c)(1) through (4) of this AD.

(1) Model A318–111, –112, –121, and –122 airplanes.

(2) Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, and –171N airplanes.

(3) Model A320–211, –212, –214, –216, –231, –232, –233, –251N, –252N, –253N, –271N, –272N, and –273N airplanes.

(4) Model A321–111, –112, –131, –211, –212, –213, –231, –232, –251N, –252N, –253N, –271N, –272N, –251NX, –252NX, –253NX, –271NX, and –272NX airplanes.

(d) Subject

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

(e) Reason

This AD was prompted by a report that during airplane boarding a loud bang was heard. A subsequent inspection revealed that one emergency escape slide/raft was found with zero reservoir pressure, due to a burst rupture disk assembly in the inflation reservoir, which was probably caused by a manufacturing defect. The FAA is issuing this AD to address insufficient reservoir pressure in an emergency escape slide/raft, which would prevent the deployment of the emergency escape slide/raft during an emergency, possibly resulting in injury to the occupants.

(f) Compliance

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

(g) Retained Requirements, With No Changes

This paragraph restates the requirements of paragraph (g) of AD 2020–01–17, with no changes. Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2019–0316, dated December 23, 2019 (EASA AD 2019–0316).

(h) Retained Exceptions, With No Changes

This paragraph restates the requirements of paragraph (h) of AD 2020–01–17, with no changes.

(1) Where EASA AD 2019–0316 refers to its effective date, this AD requires using February 14, 2020 (the effective date of FAA AD 2020–01–17).

(2) The ''Remarks'' section of EASA AD 2019–0316 does not apply to this AD.

(3) Where EASA AD 2019–0316 specifies to comply with ''the instructions of the AOT,'' this AD requires compliance with the procedures marked as required for compliance (RC) in the Alert Operators Transmission (AOT).

(i) New Actions

Except as specified in paragraph (j) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2020–0236, dated October 27, 2020 (EASA AD 2020–0236). Accomplishment of the initial check, as specified in EASA AD 2020–0236 and required by this paragraph, terminates the requirements of paragraph (g) of this AD.

(j) Exceptions to EASA AD 2020–0236

(1) Where EASA AD 2020–0236 refers to its effective date, this AD requires using the effective date of this AD.

(2) The ''Remarks'' section of EASA AD 2020–0236 does not apply to this AD.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, 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 Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: *9-AVS-AIR-730-AMOC@faa.gov.*

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

(ii) AMOCs approved previously for AD 2020–01–17 are approved as AMOCs for the corresponding actions in EASA AD 2020–0236 that are required by paragraph (i) of this AD.

(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, Large Aircraft Section, 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) *Required for Compliance (RC):* Except as required by paragraph (k)(2) of this AD, for any service information referenced in EASA AD 2020–0236 that contains RC procedures and tests, those RC 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.

(l) Related Information

For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3223; email *Sanjay.Ralhan@faa.gov.*

(m) Material Incorporated by Reference

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

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

(3) The following service information was approved for IBR on December 28, 2020.

(i) European Union Aviation Safety Agency (EASA) AD 2020–0236, dated October 27, 2020.

(ii) [Reserved]

(4) The following service information was approved for IBR on February 14, 2020 (85 FR 5310, January 30, 2020).

(i) European Union Aviation Safety Agency (EASA) AD 2019–0316, dated December 23, 2019.

(ii) [Reserved]

(5) For EASA ADs, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find these EASA ADs on the EASA website at *https://ad.easa.europa.eu.*

(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. This material may be found in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1105.

(7) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fedreg.legal@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on November 30, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27004 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2019–0984; Product Identifier 2019–NM–161–AD; Amendment 39–21290; AD 2020–21–17]

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) 2018–16–05, which applied to certain The Boeing Company Model 757 airplanes. AD 2018–16–05 required repetitive inspections for skin cracking and shim migration at the upper link drag fittings, diagonal brace cracking, and fastener looseness; and applicable on-condition actions. This AD retains the actions required by AD 2018–16–05, reduces the compliance times for certain inspections, and adds repetitive inspections at certain fastener hole locations and applicable on-condition actions. This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. This AD was also prompted by a report of multiple cracks in the drag fitting at fastener holes found during an inspection required by AD 2018–16–05. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 14, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 14, 2021.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services

(C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.* You may view this service information 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 on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2019–0984.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2019–0984; 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.

FOR FURTHER INFORMATION CONTACT:

Chandra Ramdoss, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5239; fax: 562–627–5210; email: *chandraduth.ramdoss@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2018–16–05, Amendment 39–19345 (83 FR 38250, August 6, 2018) (''AD 2018–16–05''). AD 2018–16–05 applied to certain The Boeing Company Model 757–200, –200PF, –200CB, and –300 series airplanes. The NPRM published in the **Federal Register** on December 17, 2019 (84 FR 68822). The NPRM was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. The NPRM was also prompted by a report of multiple cracks found in the drag fitting at fastener holes during inspections required by AD 2018–16–05. The NPRM proposed to continue to require repetitive inspections for skin cracking and shim migration at the upper link drag fittings, diagonal brace cracking, and fastener looseness; and applicable on-condition actions. The NPRM also proposed to reduce the compliance times for certain inspections and add repetitive inspections at certain fastener hole locations and applicable on-condition actions. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut.

Comments

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Support for the NPRM

United Airlines (United) and American Airlines (American) stated their concurrence with the NPRM.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing (APB) stated that they have reviewed the NPRM and have determined that the installation of winglets per Supplemental Type Certificate (STC) ST01518SE does not affect the accomplishment of the manufacturer's service instructions.

The FAA agrees with the commenter that STC ST01518SE does not affect the accomplishment of the manufacturer's service instructions. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a ''change in product'' alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Requests To Increase the Inspection Intervals

American and United requested that the repetitive interval for the general visual inspection of the diagonal brace and diagonal brace fittings be increased from 2,100 flight cycles (FC) to 3,000 FC. In addition, American requested that the initial interval for the inspection also be increased to 3,000 FC. The commenters maintained that 2,100 FC does not align with their maintenance program intervals, which causes a significant burden on operators. United and American also stated that they have completed the inspection of 13 and 20 airplanes respectively and found no evidence of cracking, which indicates that the existing 3,000 FC interval is conservative.

The FAA disagrees with the requested change to the indicated repetitive inspection interval and initial interval. The FAA acknowledges that incorporating the interval into the existing maintenance program could be challenging for some operators. However, the inspection involves a visual assessment that requires limited disassembly and could be carried out without placing the aircraft in a heavy maintenance configuration. The reduced intervals are based on the re-assessment of the damage tolerance analysis to adjust for eleven additional crack findings since issuance of Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017. The FAA has determined that the reduced inspection interval is necessary to avoid jeopardizing safety. The FAA has not changed the initial and repetitive inspection intervals required in this AD.

Request for Clarification That Compliance Times Cannot Be Extended

Boeing requested that clarification be added to the proposed AD to specify that the grace period provided for the newly proposed requirements cannot be used to extend compliance times for actions required by AD 2018–16–05. Boeing suggested that the FAA add a new paragraph to the proposed AD that would explicitly re-state the requirements of AD 2018–16–05. Boeing asserted that the new paragraph would maintain the requirements of AD 2018–16–05 only until the actions of paragraph (g) of the proposed AD are implemented.

The FAA does not agree to restate the requirements of AD 2018–16–05 or to add a new paragraph regarding the compliance time for the previously required actions. As explained in the NPRM, the requirements of AD 2018–16–05 are referenced in the service information required in this AD. Except for the diagonal brace inspections, the compliance times given in Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, for all actions required by AD 2018–16–05 are unchanged. The compliance times are defined both in terms of the effective date of AD 2018–16–05 and the effective date of the service information. For the diagonal brace inspections, the compliance time may provide an additional grace period; however, this affects only one inspection cycle, is applicable to a small number of operators, and is an acceptable compliance time to ensure safety. The FAA has determined all other compliance times will ensure an acceptable level of safety. This AD has not been changed in this regard.

Requests To Clarify the Effective Date of AD 2018–16–05

American and Boeing requested that the proposed AD be revised to include clarification of the effective date of AD 2018–16–05. The commenters observed that some compliance times are given as the number of flight cycles after the ''effective date of AD 2018–16–05,'' and that where Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017, uses that phrase, the proposed AD should require using ''September 10, 2018.'' American asserted that the compliance times should be in terms of the date, not of the superseded AD, and that determining the effective date of the replaced AD could be difficult otherwise. The commenters asserted that including this clarification in the new AD would avoid confusion for operators.

The FAA agrees to clarify the effective date of AD 2018–16–05. The FAA has added an exception in paragraph (h)(3) to indicate that, where Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase ''the effective date of AD 2018–16–05,'' this AD requires using ''September 10, 2018 (the effective date of AD 2018–16–05).''

Requests To Give Credit for Previously Accomplished Actions

American, Boeing, and FedEx requested that the proposed AD give credit for previously accomplished actions that were similar to or the same as the actions specified in Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019. American noted that Revision 1 of the service bulletin specifies a high frequency eddy current (HFEC) inspection for cracking at fastener locations 11–18 for airplanes already inspected in accordance with the original issue of the service bulletin. American and Boeing asserted that operators of airplanes with fastener holes 1–10 already inspected per Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017, should get credit for the initial inspection of fastener holes 1–10.

The FAA agrees and has added paragraph (i) to this AD to provide credit for previous actions accomplished using Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017. The FAA has also reidentified subsequent paragraphs accordingly. As specified in Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, the new actions for fastener locations 11–18 must still be accomplished for airplanes on which the original revision of the RB was previously done.

Requests To Allow Certain AMOCs Previously Approved for AD 2018–16–05

American, Delta Air Lines, FedEx, and United requested that the proposed AD be changed to allow AMOCs previously approved for AD 2018–16–05 for the corresponding requirements of this AD. American, FedEx, and United observed that the inspections specified in Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017, relating to fastener locations 1–10, as well as the repetitive inspections for these locations, do not change with Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019. The commenters asserted that the repairs and corresponding AMOCs should continue to be acceptable.

The FAA agrees with the requested change. The FAA has changed paragraph (j)(4) of this AD (referred to as paragraph (i)(4) in the proposed AD) to specify that AMOCs granted to AD 2018–16–05 are acceptable as AMOCs to this AD for the corresponding requirements.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously, and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related IBR Material Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019. This service information describes procedures for repetitive inspections, including general visual, detailed, and HFEC inspections, for loose fasteners, skin cracking, and shim migration at the upper link drag fittings and for cracking in the diagonal brace and diagonal brace fittings and applicable on-condition actions. This service information 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 561 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
Repetitive inspections (retained actions from AD 2018–16–05).	83 work-hours × $85 per hour = $7,055 per inspection cycle.	$0	$7,055 per inspection cycle.	$3,957,855 per inspection cycle.
Repetitive HFEC inspections (new action).	2 work-hours × $85 per hour = $170 per inspection cycle.	0	$170 per inspection cycle	$95,370 per inspection cycle.

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions 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

The FAA has determined that 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.

Adoption of 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 removing Airworthiness Directive (AD) 2018–16–05, Amendment 39–19345 (83 FR 38250, August 6, 2018), and adding the following new AD:

2020–21–17 The Boeing Company: Amendment 39–21290; Docket No. FAA–2019–0984; Product Identifier 2019–NM–161–AD.

(a) Effective Date

This AD is effective January 14, 2021.

(b) Affected ADs

This AD replaces AD 2018–16–05, Amendment 39–19345 (83 FR 38250, August 6, 2018) (''AD 2018–16–05'').

(c) Applicability

(1) This AD applies to all The Boeing Company Model 757–200, –200PF, –200CB, and –300 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE is installed, a ''change in product'' alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads; an inspection of the fastener holes revealed that cracks were found in the skin. This AD was also prompted by a report of multiple cracks found in the drag fitting at fastener holes during inspections required by AD 2018–16–05. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut.

(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 757–57A0073 RB, Revision 1, dated August 1, 2019, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 757–57A0073, Revision 1, dated August 1, 2019, which is referred to in Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase ''the Revision 1 date of Requirements Bulletin 757–57A0073 RB,'' this AD requires using ''the effective date of this AD.''

(2) Where Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, specifies contacting Boeing for repair instructions: This AD requires doing the repair and applicable on-condition actions before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(3) Where Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, uses the phrase ''the effective date of AD 2018–16–05,'' this AD requires using ''September 10, 2018 (the effective date of AD 2018–16–05).''

(i) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, except for the open-hole high frequency eddy current inspections at fastener locations 11–18, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 757–57A0073 RB, dated July 14, 2017.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO 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 certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to: *9-ANM-LAACO-AMOC-Requests@faa.gov.*

(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.

(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, Los Angeles ACO 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 previously for AD 2018–16–05 are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019, that are required by paragraph (g) of this AD.

(k) Related Information

(1) For more information about this AD, contact Chandra Ramdoss, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5239; fax: 562–627–5210; email: *chandraduth.ramdoss@faa.gov.*

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (4) of this AD.

(l) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 757–57A0073 RB, Revision 1, dated August 1, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial

Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *https://www.myboeingfleet.com.*

(4) You may view this service information 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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fedreg.legal@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on October 7, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27007 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2020–0667; Airspace Docket No. 20–AGL–24]

RIN 2120–AA66

Amendment of Multiple Air Traffic Service (ATS) Routes in the Northcentral United States

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends VHF Omnidirectional Range (VOR) Federal airways V–15, V–26, V–55, V–78, V–100, V–159, V–175, V–219, and V–307, and Area Navigation (RNAV) routes T–285 and T–354 in the Northcentral United States. The modifications are necessary due to the planned decommissioning of the VOR portion of the Park Rapids, MN, VOR/Distance Measuring Equipment (VOR/DME); Sioux City, IA, VOR/Tactical Air Navigation (VORTAC); and Huron, SD, VORTAC navigation aids (NAVAIDs). The NAVAIDs provide navigation guidance for segments of the affected air traffic service (ATS) routes. The VORs are being decommissioned as part of the FAA's VOR Minimum Operational Network (MON) program.

DATES: Effective date 0901 UTC, February 25, 2021. The Director of the Federal Register approves this incorporation by reference action under Title 1 Code of Federal Regulations part 51, subject to the annual revision of FAA Order 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11E, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11E at NARA, email: *fedreg.legal@nara.gov* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

FOR FURTHER INFORMATION CONTACT: Colby Abbott, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; 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 route structure as necessary to preserve the safe and efficient flow of air traffic within the National Airspace System.

History

The FAA published a notice of proposed rulemaking (NPRM) for Docket No. FAA–2020–0667 in the **Federal Register** (85 FR 47317; August 5, 2020), amending VOR Federal airways V–15, V–26, V–55, V–78, V–100, V–159, V–175, V–219, and V–307, and RNAV routes T–285 and T–354 in the Northcentral United States. The proposed amendment actions were due to the planned decommissioning of the VOR portion of the Park Rapids, MN, VOR/DME; Sioux City, IA, VORTAC; and Huron, SD, VORTAC NAVAIDs. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

Subsequent to the NPRM, the FAA published a rule for Docket No. FAA–2020–0189 in the **Federal Register** (85 FR 50777; August 18, 2020), amending VOR Federal airway V–55 by removing the airway segment between the Pullman, MI, VOR/DME and the intersection of the Green Bay, WI, VORTAC 270° and Oshkosh, WI, VORTAC 339° radials (BIPID fix). That airway amendment, effective November 5, 2020, is included in this rule.

Additionally, subsequent to the NPRM, the FAA published a rule for Docket No. FAA–2020–0294 in the **Federal Register** (85 FR 51324; August 20, 2020), amending RNAV route T–354 by replacing the Siren DME route point with the SSKYY, WI, waypoint and extending the route southeastward from the SSKYY, WI, waypoint to the Cunningham, KY, VOR/DME. Those route amendments, effective November 5, 2020, are also included in this rule.

VOR Federal airways are published in paragraph 6010(a) and RNAV T-routes are published in paragraph 6011 of FAA Order 7400.11E dated July 21, 2020, and effective September 15, 2020, which is incorporated by reference in 14 CFR 71.1. The VOR Federal airways listed in this document will be subsequently published in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020. FAA Order 7400.11E is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11E lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

The FAA is amending Title 14 Code of Federal Regulations (14 CFR) part 71 by modifying VOR Federal airways V–15, V–26, V–55, V–78, V–100, V–159, V–175, V–219, and V–307, and RNAV routes T–285 and T–354. The planned decommissioning of the VOR portion of the Park Rapids, MN, VOR/DME; Sioux City, IA, VORTAC; and Huron, SD, VORTAC NAVAIDs has made this action necessary. The VOR Federal airway changes are outlined below.

V–15: V–15 extends between the Navasota, TX, VOR/DME and the Bonham, TX, VORTAC; between the Okmulgee, OK, VOR/DME and the Neosho, MO, VOR/DME; and between the Sioux City, IA, VORTAC and the

Minot, ND, VOR/DME. The airway segment overlying the Sioux City, IA, and Huron, SD, VORTACs between the Sioux City, IA, VORTAC and the Aberdeen, SD, VOR/DME is removed. The unaffected portions of the existing airway remain as charted.

V–26: V–26 extends between the Blue Mesa, CO, VOR/DME and the White Cloud, MI, VOR/DME. The airway segment overlying the Huron, SD, VORTAC between the Pierre, SD, VORTAC and the Redwood Falls, MN, VOR/DME is removed. The unaffected portions of the existing airway remain as charted.

V–55: V–55 currently extends between the Dayton, OH, VOR/DME and the Pullman, MI, VOR/DME; and between the Park Rapids, MN, VOR/DME and the Bismarck, ND, VOR/DME. The airway segment overlying the Park Rapids, MN, VOR/DME between the Park Rapids, MN, VOR/DME and the Grand Forks, ND, VOR/DME is removed. The unaffected portions of the existing airway remain as charted.

V–78: V–78 extends between the Huron, SD, VORTAC and the Escanaba, MI, VOR/DME; and between the Pellston, MI, VORTAC and the Saginaw, MI, VOR/DME. The airway segment overlying the Huron, SD, VORTAC between the Huron, SD, VORTAC and the Watertown, SD, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

V–100: V–100 extends between the Medicine Bow, WY, VOR/DME and the Litchfield, MI, VOR/DME. The airway segment overlying the Sioux City, IA, VORTAC between the O'Neill, NE, VORTAC and the Fort Dodge, IA, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

V–159: V–159 extends between the Virginia Key, FL, VOR/DME and the Vulcan, AL, VORTAC; and between the Holly Springs, MS, VORTAC and the Huron, SD, VORTAC. The airway segment overlying the Sioux City, IA, and Huron, SD, VORTACs between the Omaha, IA, VORTAC and the Huron, SD, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

V–175: V–175 currently extends between the Malden, MO, VORTAC and the Winnipeg, MB, Canada, VORTAC. The airspace within Canada is excluded. The airway segment overlying the Sioux City, IA, VORTAC between the Des Moines, IA, VORTAC and the Worthington, MN, VOR/DME is removed; and the airway segment overlying the Park Rapids, MN, VOR/DME between the Alexandria, MN, VOR/DME and the Winnipeg, MB, Canada, VORTAC is removed. The exclusion statement for the airspace within Canada is also removed. The unaffected portions of the existing airway remain as charted.

V–219: V–219 extends between the Hayes Center, NE, VORTAC and the Sioux City, IA, VORTAC. The airway segment overlying the Sioux City, IA, VORTAC between the Norfolk, NE, VOR/DME and the Sioux City, IA, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

V–307: V–307 extends between the Harrison, AR, VOR/DME and the Sioux City, IA, VORTAC. The airway segment overlying the Sioux City, IA, VORTAC between the Omaha, IA, VORTAC and the Sioux City, IA, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

The RNAV route changes are outlined below.

T–285: T–285 extends between the North Platte, NE, VOR/DME and the Huron, SD, VORTAC. The Huron, SD (HON), route point is changed from being listed as ''VORTAC'' to ''DME.'' The existing RNAV route remains as charted.

T–354: T–354 extends between the Park Rapids, MN, VOR/DME and the Cunningham, KY, VOR/DME. The Park Rapids, MN (PKD), route point is changed from being listed as ''VOR/DME'' to ''DME'' and a route segment extending northwestward from the Park Rapids, MN, DME to the BYZIN, ND, waypoint is added. The existing RNAV route remains as charted with the addition of the route segment between the BYZIN, ND, waypoint and the Park Rapids, MN, DME.

All NAVAID radials listed in the VOR Federal airway descriptions below are unchanged and stated in True degrees.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

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 Department of Transportation (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 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

The FAA has determined that this action of amending VOR Federal airways V–15, V–26, V–55, V–78, V–100, V–159, V–175, V–219, and V–307, and RNAV routes T–285 and T–354, due to the planned decommissioning of the VOR portion of the Park Rapids, MN, VOR/DME; Sioux City, IA, VORTAC; and Huron, SD, VORTAC NAVAIDs, qualifies for categorical exclusion under the National Environmental Policy Act 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). 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).

Adoption of 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 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 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020, is amended as follows:

Paragraph 6010(a) Domestic VOR Federal Airways.

* * * * *

V–15 [Amended]

From Navasota, TX; College Station, TX; Waco, TX; Cedar Creek, TX; to Bonham, TX. From Okmulgee, OK; to Neosho, MO. From Aberdeen, SD; Bismarck, ND; to Minot, ND.

* * * * *

V–26 [Amended]

From Blue Mesa, CO; Montrose, CO; 13 miles 112 MSL, 131 MSL, Grand Junction, CO; Meeker, CO; Cherokee, WY; Muddy Mountain, WY; 14 miles, 37 miles 75 MSL, 84 miles 90 MSL, Rapid City, SD; Philip, SD; to Pierre, SD. From Redwood Falls, MN; Farmington, MN; Eau Claire, WI; Wausau, WI; Green Bay, WI; INT Green Bay 116° and White Cloud, MI, 302° radials; to White Cloud.

* * * * *

V–55 [Amended]

From Dayton, OH; Fort Wayne, IN; Goshen, IN; Gipper, MI; Keeler, MI; to Pullman, MI. From Grand Forks, ND; INT Grand Forks 239° and Bismarck, ND, 067° radials; to Bismarck.

* * * * *

V–78 [Amended]

From Watertown, SD; Darwin, MN; Gopher, MN; INT Gopher 091° and Eau Claire, WI, 290° radials; Eau Claire; Rhinelander, WI; Iron Mountain, MI; to Escanaba, MI. From Pellston, MI; Alpena, MI; INT Alpena 232° and Saginaw, MI, 353° radials; to Saginaw.

* * * * *

V–100 [Amended]

From Medicine Bow, WY; Scottsbluff, NE; Alliance, NE; Ainsworth, NE; to O'Neill, NE. From Fort Dodge, IA; Waterloo, IA; Dubuque, IA; Rockford, IL; INT Rockford 074° and Janesville, WI, 112° radials; INT Janesville 112° and Northbrook, IL, 291° radials; Northbrook; INT Northbrook 095° and Keeler, MI, 271° radials; Keeler; to Litchfield, MI.

* * * * *

V–159 [Amended]

From Virginia Key, FL; INT Virginia Key 344° and Treasure, FL, 178° radials; Treasure; INT Treasure 318° and Orlando, FL, 140° radials; Orlando; Ocala, FL; Cross City, FL; Greenville, FL; Pecan, GA; Eufaula, AL; Tuskegee, AL; to Vulcan, AL. From Holly Springs, MS; Gilmore, AR; Walnut Ridge, AR; Dogwood, MO; Springfield, MO; Napoleon, MO; INT Napoleon 005° and St. Joseph, MO, 122° radials; St. Joseph; to Omaha, IA.

* * * * *

V–175 [Amended]

From Malden, MO; Vichy, MO; Hallsville, MO; Macon, MO; Kirksville, MO; to Des Moines, IA. From Worthington, MN; Redwood Falls, MN; to Alexandria, MN.

* * * * *

V–219 [Amended]

From Hayes Center, NE; INT Hayes Center 059° and Wolbach, NE, 251° radials; Wolbach; to Norfolk, NE.

* * * * *

V–307 [Amended]

From Harrison, AR; Neosho, MO; Oswego, KS; Chanute, KS; Emporia, KS; INT Emporia 336° and Pawnee City, NE, 194° radials; Pawnee City; to Omaha, IA.

* * * * *

6011 United States Area Navigation Routes.

* * * * *

T–285 North Platte, NE (LBF) to Huron, SD (HON) [Amended]

North Platte, NE (LBF)	VOR/DME	(Lat. 41°02′55.34″ N, long. 100°44′49.55″ W)
Thedford, NE (TDD)	VOR/DM	(Lat. 41°58′53.99″ N, long. 100°43′08.55″ W)
MARSS, NE	Fix	(Lat. 42°27′48.92″ N, long. 100°36′15.32″ W)
Valentine, NE (VTN)	NDB	(Lat. 42°51′41.85″ N, long. 100°32′58.73″ W)
LKOTA, SD	WP	(Lat. 43°15′28.00″ N, long. 100°03′14.00″ W)
LESNR, SD	WP	(Lat. 43°29′16.06″ N, long. 099°45′41.55″ W)
Huron, SD (HON)	DME	(Lat. 44°26′24.30″ N, long. 098°18′39.89″ W)

* * * * * * *

T–354 BYZIN, MN to Cunningham, KY (CNG) [Amended]

BYZIN, MN	WP	(lat. 47°29′03.97″ N, long. 096°13′28.09″ W)
Park Rapids, MN (PKD)	DME	(Lat. 46°53′53.34″ N, long. 095°04′15.21″ W)
BRNRD, MN	WP	(Lat. 46°20′53.81″ N, long. 094°01′33.54″ W)
SSKYY, WI	WP	(Lat. 45°49′13.60″ N, long. 092°22′28.26″ W)
TONOC, WI	FIX	(Lat. 45°03′47.56″ N, long. 091°38′11.87″ W)
KOETZ, WI	WP	(Lat. 44°13′15.00″ N, long. 091°28′14.00″ W)
HRMNN, WI	WP	(Lat. 43°55′32.51″ N, long. 090°58′04.07″ W)
FOMAG, WI	WP	(Lat. 43°29′38.44″ N, long. 089°46′09.53″ W)
MAYSE, WI	WP	(Lat. 43°10′14.18″ N, long. 089°42′46.52″ W)
HOMRC, IL	WP	(Lat. 41°34′04.67″ N, long. 089°30′20.55″ W)
CPTON, IL	WP	(Lat. 41°06′51.57″ N, long. 089°11′58.93″ W)
BLLUE, IL	WP	(Lat. 40°07′09.20″ N, long. 088°32′45.48″ W)
BOSTN, IL	WP	(Lat. 39°53′46.57″ N, long. 088°26′18.96″ W)
Bible Grove, IL (BIB)	VORTAC	(Lat. 38°55′13.24″ N, long. 088°28′54.50″ W)
Cunningham, KY (CNG)	VOR/DME	(Lat. 37°00′30.99″ N, long. 088°50′12.89″ W)

* * * * *

Issued in Washington, DC, on December 3, 2020.

George Gonzalez,

Acting Manager, Rules and Regulations Group.

[FR Doc. 2020–26919 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2020–0654; Airspace Docket No. 20–ASO–17]

RIN 2120–AA66

Amendment of V–53, V–115, V–140, T–215, and T–323, and Revocation of V–339 in the Vicinity of Hazard, KY

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends VHF Omnidirectional Range (VOR) Federal airways V–53, V–115, and V–140, and Area Navigation (RNAV) T-routes T–215 and T–323; and removes VOR Federal airway V–339 in the vicinity of Hazard, KY. The Air Traffic Service (ATS) route modifications are necessary due to the planned decommissioning of the VOR portion of the Hazard, KY, VOR/Distance Measuring Equipment (VOR/DME) navigation aid (NAVAID) which provides navigation guidance for portions of the affected ATS routes. The Hazard VOR is being decommissioned as part of the FAA's VOR Minimum Operational Network (MON) program.

DATES: Effective date 0901 UTC, February 25, 2021. The Director of the Federal Register approves this incorporation by reference action under Title 1 Code of Federal Regulations part 51, subject to the annual revision of FAA Order 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11E, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/*. For further information, you can contact the Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11E at NARA, email: *fedreg.legal@nara.gov* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html*.

FOR FURTHER INFORMATION CONTACT: Colby Abbott, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; 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 route structure as necessary to preserve the safe and efficient flow of air traffic within the National Airspace System.

History

The FAA published a notice of proposed rulemaking for Docket No. FAA–2020–0654 in the **Federal Register** (85 FR 44801; July 24, 2020), amending VOR Federal airways V–53, V–115, and V–140, and RNAV T-routes T–215 and T–323; and removing VOR Federal airway V–339 in the vicinity of Hazard, KY. The proposed amendment and revocation actions were due to the planned decommissioning of the VOR portion of the Hazard, KY, VOR/DME. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

VOR Federal airways are published in paragraph 6010(a) and RNAV T-routes are published in paragraph 6011 of FAA Order 7400.11E dated July 21, 2020, and effective September 15, 2020, which is incorporated by reference in 14 CFR 71.1. The VOR Federal airways listed in this document will be subsequently published in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020. FAA Order 7400.11E is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11E lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

The FAA is amending Title 14 Code of Federal Regulations (14 CFR) part 71 by modifying VOR Federal airways V–53, V–115, and V–140, and RNAV routes T–215 and T–323; and removing VOR Federal airway V–339. The planned decommissioning of the VOR portion of the Hazard, KY, VOR/DME NAVAID has made this action necessary. The VOR Federal airway changes are outlined below.

V–53: V–53 extends between the Charleston, SC, VOR/Tactical Air Navigation (VORTAC) and the Brickyard, IN, VOR/DME. The airspace within R–3401B is excluded. The airway segment overlying the Hazard, KY, VOR/DME between the Holston Mountain, TN, VORTAC and the Lexington, KY, VOR/DME is removed. The unaffected portions of the existing airway remain as charted.

V–115: V–115 extends between the Crestview, FL, VORTAC and the Parkersburg, WV, VORTAC. The airway segment overlying the Hazard, KY, VOR/DME between the Volunteer, TN, VORTAC and the Charleston, WV, VORTAC is removed. The unaffected portions of the existing airway remain as charted.

V–140: V–140 extends between the Panhandle, TX, VORTAC and the Casanova, VA, VORTAC. The airway segment overlying the Hazard, KY, VOR/DME between the London, KY, VOR/DME and the Bluefield, WV, VOR/DME is removed. The unaffected portions of the existing airway remain as charted.

V–339: V–339 extends between the Hazard, KY, VOR/DME and the Falmouth, KY, VOR/DME. The airway is removed in its entirety.

The RNAV T-route changes are outlined below.

T–215: T–215 extends between the Lexington, KY, VOR/DME and the GAMKE, IN, waypoint (WP). The route is extended southeastward from the Lexington, KY, VOR/DME to the Holston Mountain, TN, VORTAC. Additionally, the type of facility for Lexington, KY, is corrected from ''VORTAC'' to ''VOR/DME'' and the geographic coordinates of each route point are updated to be expressed in degrees, minutes, seconds, and hundredths of a second.

T–323: T–323 extends between the CROCS, GA, WP and the HIGGI, NC, WP. The route is extended northward from the HIGGI, NC, WP to the Hazard, KY, DME. Additionally, the geographic

coordinates of each route point are updated to be expressed in degrees, minutes, seconds, and hundredths of a second.

All NAVAID radials in the VOR Federal airway descriptions below are unchanged and stated in True degrees.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

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 Department of Transportation (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 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

The FAA has determined that this action of amending VOR Federal airways V–53, V–115, and V–140, and RNAV routes T–215 and T–323; and removing VOR Federal airway V–339, due to the planned decommissioning of the VOR portion of the Hazard, KY, VOR/DME NAVAID, qualifies for categorical exclusion under the National Environmental Policy Act 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). 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).

Adoption of 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 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 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020, is amended as follows:

Paragraph 6010(a) Domestic VOR Federal Airways.

* * * * *

V–53 [Amended]

From Charleston, SC; Columbia, SC; Spartanburg, SC; Sugarloaf Mountain, NC; to Holston Mountain, TN. From Lexington, KY; Louisville, KY; INT Louisville 333° and Brickyard, IN, 170° radials; to Brickyard. The airspace within R–3401B is excluded.

* * * * *

V–115 [Amended]

From Crestview, FL; INT Crestview 001° and Montgomery, AL, 204° radials; Montgomery; INT Montgomery 323° and Vulcan, AL, 177° radials; Vulcan; Choo Choo, TN; to Volunteer, TN. From Charleston, WV; to Parkersburg, WV.

* * * * *

V–140 [Amended]

From Panhandle, TX; Burns Flat, OK; Kingfisher, OK; INT Kingfisher 072° and Tulsa, OK, 261° radials; Tulsa; Razorback, AR; Harrison, AR; Walnut Ridge, AR; Dyersburg, TN; Nashville, TN; Livingston, TN; to London, KY. From Bluefield, WV; INT Bluefield 071° and Montebello, VA, 250° radials; Montebello; to Casanova, VA.

* * * * *

V–339 [Removed]

* * * * *

6011. United States Area Navigation Routes.

* * * * *

T–215 Holston Mountain, TN (HMV) to GAMKE, IN [Amended]

Holston Mountain, TN (HMV)	VORTAC	(Lat. 36°26′13.40″ N, long. 082°07′46.56″ W)
HILTO, VA	WP	(Lat. 36°41′48.46″ N, long. 082°26′07.44″ W)
FLENR, VA	WP	(Lat. 36°56′44.27″ N, long. 082°43′42.75″ W)
RISTE, KY	WP	(Lat. 37°09′02.92″ N, long. 082°58′24.38″ W)
Hazard, KY (AZQ)	DME	(Lat. 37°23′28.52″ N, long. 083°15′46.83″ W)
HUGEN, KY	FIX	(Lat. 37°31′46.14″ N, long. 083°32′58.54″ W)
Lexington, KY (HYK)	VOR/DME	(Lat. 37°57′58.86″ N, long. 084°28′21.06″ W)
GAMKE, IN	WP	(Lat. 38°46′12.99″ N, long. 085°14′35.37″ W)

* * * * * * *

T–323 CROCS, GA to Hazard, KY (AZQ) [Amended]

CROCS, GA	WP	(Lat. 32°27′17.69″ N, long. 082°46′29.06″ W)
BOBBR, GA	WP	(Lat. 33°19′57.07″ N, long. 083°08′19.47″ W)
BIGNN, GA	WP	(Lat. 34°20′34.38″ N, long. 083°33′06.80″ W)
ZPPLN, NC	WP	(Lat. 34°59′47.42″ N, long. 083°49′37.73″ W)
HIGGI, NC	WP	(Lat. 35°26′46.57″ N, long. 083°46′41.05″ W)
KIDBE, TN	WP	(Lat. 35°51′16.23″ N, long. 083°40′19.66″ W)
ZADOT, TN	WP	(Lat. 36°35′32.17″ N, long. 083°28′40.09″ W)
WELLA, KY	WP	(Lat. 37°02′15.68″ N, long. 083°21′31.07″ W)
Hazard, KY (AZQ)	DME	(Lat. 37°23′28.52″ N, long. 083°15′46.83″ W)

* * * * *

Issued in Washington, DC, on December 3, 2020.

George Gonzalez,

Acting Manager, Rules and Regulations Group.

[FR Doc. 2020–26920 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

UNITED STATES AGENCY FOR GLOBAL MEDIA

22 CFR Chapter V

RIN 3112–AA03

Repeal of Regulation Entitled Firewall and Highest Standards of Professional Journalism

AGENCY: United States Agency for Global Media (formerly Broadcasting Board of Governors).

ACTION: Final rule.

SUMMARY: The United States Agency for Global Media (formerly known as the Broadcasting Board of Governors) is repealing the regulation entitled ''Firewall and Highest Standards of Professional Journalism'' published on June 15, 2020.

DATES: This rule is effective without actual notice as of December 10, 2020. For the purposes of enforcement, actual notice will be used as of October 26, 2020.

FOR FURTHER INFORMATION CONTACT: Daniel Rosenholtz at *Rule_Comments@usagm.gov* or (202) 920–2342.

SUPPLEMENTARY INFORMATION:

Background

The United States Agency for Global Media (''USAGM'') is an agency of the Federal Government that exercises authority over non-military United States government broadcasting. USAGM, which was created by the International Broadcasting Act of 1994 under a different name, currently operates five networks—Voice of America (''VOA''), the Office of Cuba Broadcasting (''OCB''), Radio Free Europe/Radio Liberty (''RFE/RL''), Radio Free Asia (''RFA'') and the Middle East Broadcasting Networks (''MBN'') (collectively the ''USAGM Networks'' or ''Networks'').

On June 4, 2020, the Broadcasting Board of Governors (''BBG''), USAGM's leadership at the time, promulgated a regulation governing internal agency operations, *Firewall and Highest Standards of Professional Journalism,* 85 FR 36150 (June 15, 2020) (codified at 22 CFR part 531) (the ''Regulation'') that purported to implement section 305(b) of International Broadcasting Act (''IBA'') (22 U.S.C. 6204(b)).

The Regulation was promulgated only when it became apparent that the leadership of USAGM was about to change via Senate confirmation of a USAGM Chief Executive Officer (''CEO''). *See Firewall and Highest Standards of Professional Journalism,* 85 FR at 36150 (expressly identifying the pending end of the Board's tenure as the motivating factor for the timing and issuance of the Regulation). Senate confirmation of a CEO caused the BBG to dissolve, and transferred all of its powers to the CEO. *See* 22 U.S.C. 6203(b)(1).

At its core, the Regulation asserts that ''a firewall exists between anybody involved with any aspect of journalism (*e.g.,* the creation, editing, reporting, distributing, etc., of content) and everyone else in the organization,'' and that this former Board-preferred policy is violated when anyone outside of the ''newsroom'' ''attempts to direct, pressure, coerce, threaten, interfere with, or otherwise impermissibly influence any of the USAGM Networks, including their leadership, officers, employees, or staff, in the performance of their journalistic and broadcasting duties and activities.'' 22 CFR 531.3(b), (c). This regulatory instruction by its terms suggests USAGM is a typical broadcasting organization, which squarely contradicts USAGM's statutory mandate to promote particular United States values and interests. *See, e.g.,* 22 U.S.C. 6202(a)(1)–(2) (mandating that United States international broadcasting be consistent with United States foreign policy objectives, international telecommunications policies, and United States treaty obligations); *id.* Section 6202(a)(8) (mandating the promotion of ''respect for human rights, including freedom of religion''). Unlike private broadcasting organizations, the mission of USAGM from its statutory origins has been to support United States foreign policy goals by furthering American values and facilitating the dissemination of objectively accurate factual news and information overseas. *See* United States Information and Educational Exchange Act of 1948, Public Law 80–402, section 2, 62 Stat. 6, 6 (1948); *see also, e.g., id.* section 6201(2) (noting that the values furthered by the agency such as the ''[o]pen communication of information and ideas among the peoples of the world,'' further international peace and stability, and serve ''the interests of the United States''); *id.* section 6202(a)(1), (3) (requiring United States broadcasting to ''be consistent with the broad foreign policy objectives of the United States'' and with United States treaty obligations); *id.* section 6202(b)(1), (3) (mandating that United States international broadcasting include ''news which is consistently reliable and authoritative, accurate, objective, and comprehensive'' and constitutes a ''clear and effective presentation of the policies of the United States Government and responsible discussion and opinion on those policies''); *id.* section 6202(b)(4) (requiring United States international broadcasting to include ''the capability to provide a surge capacity to support United States foreign policy objectives during crises abroad'').

Upon taking office, the CEO directed a review of the Regulation and sought external legal counsel.

The Regulation is hereby repealed.

I. There Is Tension Between the Regulation on the One Hand, and USAGM's Statutory Mission and Article II of the Constitution on the Other

A. USAGM's Statutory Mission

Since United States international broadcasting was first codified in 1948, the statutory objective was—and still is—''to enable the Government of the United States to promote a better understanding of the United States in other countries . . . [including by] an information service to disseminate abroad information about the United States, its people, and policies . . . .'' United States Information and Educational Exchange Act of 1948, Public Law 80–402, section 2, 62 Stat. 6, 6 (1948) (codified at 22 U.S.C. 1431).

When VOA was codified in statute in 1976, Congress made clear that VOA's purpose was to serve American interests abroad. VOA was to ''communicat[e] directly with the peoples of the world by radio'' to serve the ''long-range interests of the United States'' as governed by enumerated principles which have been codified in the VOA Charter. ''VOA will serve as a consistently reliable and authoritative source of news [that is] accurate, objective, and comprehensive''; ''represent America . . . and . . . present a balanced and comprehensive projection of significant American thought''; and ''present the policies of the United States clearly and effectively, and . . . present responsible discussion and opinion on these policies.'' Foreign Relations Authorization Act, FY 1977, Public Law 94–350, section 206, 90 Stat. 823, 831–32 (1976).

The current statutory mission of USAGM is to serve United States interests through Government

sponsored news abroad. Under the IBA, United States international broadcasting must:

• ''[B]e consistent with the broad foreign policy objectives of the United States.'' *Id.* section 6202(a)(1).

• ''[B]e consistent with the international telecommunications policies and treaty obligations of the United States.'' *Id.* section 6202(a)(2).

• ''[I]nclude a balanced and comprehensive projection of United States thought and institutions, reflecting the diversity of United States culture and society.'' *Id.* section 6202(b)(2).

• ''[I]nclude clear and effective presentation of the policies of the United States Government and responsible discussion and opinion on those policies, including editorials, broadcast by the Voice of America, which present the views of the United States Government.'' *Id.* section 6202(b)(3).

• Maintain ''the capability to provide a surge capacity to support United States foreign policy objectives during crises abroad.'' *Id.* section 6202(b)(4).

• ''[P]romote respect for human rights, including freedom of religion.'' *Id.* section 6202(a)(8). VOA is further required to ''present a balanced and comprehensive projection of significant American thought and institutions'' (*id.* section 6202(c)(2)) and to ''present the polices of the United States clearly and effectively, and . . . also present responsible discussion and opinion on these policies.'' (*Id.* section 6202(c)(3)). These tasks are seen as essential to serving ''[t]he long range interests of the United States.'' *Id.* section 6202(c).[1]

Because of this special mission, USAGM and its Networks do not function as a traditional news or media agency and were never intended to do so. *See, e.g., id.* section 6202(a)(3) (prohibiting United States international broadcasting from ''duplicat[ing] the activities of private United States broadcasters''); *see also id.* section 6202(a)(4) (prohibiting United States international broadcasting from ''duplicat[ing] the activities of government supported broadcasting entities of other democratic nations''). By design, their purpose and focus is foreign relations and the promotion of American objectives—not simply presenting news or engaging in journalistic expression. For example, the Networks are to articulate the American perspective while countering international views that undermine American values and freedom, or that might aid our enemies' messaging, by providing a ''clear and effective presentation of the policies of the United States Government and responsible discussion and opinion on those policies.'' *Id.* section 6202(b)(3). They also counter soft-power through news in countries without a free media by presenting ''a variety of opinions and voices from within particular nations and regions prevented by censorship or repression from speaking to their fellow countrymen.'' *Id.* section 6202(b)(7).

By law, the USAGM networks must ''not duplicate the activities of private United States broadcasters'' (*id.* section 6202(a)(3)) or ''the activities of government supported broadcasting entities of other democratic nations.'' (*Id.* section 6202(a)(4)). Under the Smith-Mundt Act of 1948 (as amended) USAGM may broadcast only news ''intended for *foreign* audiences abroad.'' *Id.* section 1461(a) (emphasis added). And ''[n]o funds authorized to be appropriated to the Department of State or the Broadcasting Board of Governors shall be used to influence public opinion in the United States.'' *Id.* section 1461–1a(a).

The IBA grants the CEO a number of broad authorities to carry out these weighty responsibilities to promote American interests abroad.[2] In particular the CEO has express power:

• ''To direct and supervise all broadcasting activities conducted pursuant to this title.'' *Id.* section 6204(a)(1).

• ''To review and evaluate the mission and operation of, and to assess the quality, effectiveness, and professional integrity, of all such activities within the context of the broad foreign policy objectives of the United States.'' *Id.* section 6204(a)(2).

• ''To ensure that United States international broadcasting is conducted in accordance with the standards and principles'' set forth in the IBA. *Id.* section 6204(a)(3).

• ''To review, evaluate, and determine, at least annually, after consultation with the Secretary of State, the addition or deletion of language services.'' *Id.* section 6204(a)(4).

• To take a number of different expansive personnel, materiel, and contracting actions. *Id.* section 6204(a)(8), (10)–(11), (15)–(19).

• ''To redirect or reprogram funds within the scope of any grant or cooperative agreement, or between grantees, as necessary.'' *Id.* section 6204(a)(21).

• To appoint the Officers and Directors of the USAGM Networks who serve at his pleasure. *Id.* section 6209(d).

The CEO also ''shall regularly consult with and seek from the Secretary of State guidance on foreign policy issues.'' *Id.* section 6209b.

B. Article II of the United States Constitution

Article II imbues the statutory scheme charging USAGM to promote American interests abroad. USAGM, which is now overseen by a single CEO, is not an ''independent establishment.''[3] Its CEO is ''appointed by the President, by and with the advice and consent of the Senate.'' 22 U.S.C. 6203(b)(1). The CEO thus has both the power and the duty to execute the applicable laws of the United States under the President's supervision. *See, e.g., Myers* v. *United States,* 272 U.S. 52, 135 (1926); *Statute Limiting the President's Authority to Supervise the Director of the Center for Disease Control in the Distribution of an AIDS Pamphlet,* 12 Op. OLC 47, 56–58 (Mar. 11, 1988); *The Jewels of the Princess Orange,* 2 U.S. Op. Att'y Gen. 482, 486–87 (Dec. 31, 1831). Executive power is at its zenith in the realm of foreign affairs.

''[T]he President alone has the power to speak or listen as a representative of

[1] *See also* 22 U.S.C. 6209(b)(1) (if CEO consolidates grantees he must require the consolidated grantee to ''counter state-sponsored propaganda which undermines the national security or foreign policy interests of the United States and its allies''); *id.* section 6201(2) (statutory purpose of IBA to ''[o]pen communication of information and ideas among the peoples of the world''); Foreign Relations Authorization Act, Fiscal Years 1988 and 1989, Public Law 100–204, Title IV, section 403, 101 Stat. 1381 (Dec. 22, 1987) (''The Congress finds that the overriding national security aspects of the $1,300,000,000 facilities modernization program of the Voice of America require the assurance of uninterrupted logistic support under all circumstances for the program. Therefore, it is in the best interests of the United States to provide a preference for United States contractors bidding on the projects of this program.'').

[2] The consolidation from Board to CEO was the result of a widespread view that USAGM's predecessor agency needed reform that could only come from the energy of a single leader. *See, e.g., Statement on Signing the National Defense Authorization Act for Fiscal Year 2017,* at 3 (Dec. 23, 2016) (noting strong support for needed ''structural reform'' of USAGM and ''empowerment'' of the USAGM CEO); *Markup on H.R. 1853, H.R. 2100, H.R. 2323, H. Res. 213, H. Res. 235: H. Comm. on Foreign Affairs,* 114th Cong. 104–05 (May 21, 2015) (statement of Ranking Member Elliot L. Engel) (describing predecessor bill as a ''much-needed overhaul''); *Terrorist Attack in Benghazi: The Secretary of State's View: Hearing before the H. Comm. on Foreign Affairs,* 113th Cong. 25–26 (Jan. 23, 2013) (statement of Hillary Rodham Clinton, Secretary of State) (describing USAGM's abilities to project soft power as ''practically defunct'').

[3] It has long been the case, as the Supreme Court recently reaffirmed, just last term, that ''[t]he entire executive Power belongs to the President alone. . . . [L]esser officers must remain accountable to the President, whose authority they wield.'' *Seila Law LLC* v. *CFPB,* 140 S.Ct. 2183, 2197 (2020).

the nation.'' *United States* v. *Curtiss-Wright Export Corp.,* 299 U.S. 304, 319 (1936). Therefore, the President is the '''sole organ of the federal government in the field of international relations''' (*Id.* at 320 (internal citation omitted)) and the President has ''unique responsibility'' for the conduct of ''foreign . . . affairs.'' (*Sale* v. *Haitian Ctrs. Council, Inc.,* 509 U.S. 155, 188 (1993)). Because USAGM's mandate is to further the foreign policy interests of the United States, the President's appointee necessarily must have the authority to participate in the substance of advancing that mission.[4]

C. The Regulation

The Regulation begins by asserting that USAGM is ''an independent establishment of the federal government,'' (*Firewall and Highest Standards of Professional Journalism,* 85 FR 36150) and claims that USAGM networks necessarily enjoy full editorial independence in order to maintain their ''professional independence and integrity,'' per section 305(b) of the IBA. This statutorily mandated firewall protects the independence of the networks by insulating their editorial decisions from interference from those outside of the network, or from impermissible considerations, as set forth in 22 CFR 531.1(a). Section 305(b) of the IBA, however, provides only that ''[t]he Secretary of State and the Chief Executive Officer, in carrying out their functions, shall respect the professional independence and integrity of the Board, its broadcasting services, and the grantees of the Board.'' 22 U.S.C. 6204(b).

The Regulation then posits that the ''newsroom'' of each USAGM Network is ''fully insulated'' from what it calls ''*any* political or other external pressures or processes that would be inconsistent with the highest standards of professional journalism.'' *Id.* section 531.2(b) (emphasis added). At its core, the Regulation asserts it is violated when any person within the Executive Branch or a Network, but outside the newsroom, attempts to direct, pressure, coerce, threaten, interfere with, or otherwise impermissibly influence any of the USAGM networks, including their leadership, officers, employees, or staff, in the performance of their journalistic and broadcasting duties and activities. It is also violated when someone inside the newsroom acts in furtherance of or pursuant to such impermissible influence. *Id.* section 531.3(c). The Regulation purports to bind not only USAGM officials, but the entire Executive Branch—up to and including the President of the United States. The Regulation's only exception to this general edict is that the firewall does not prevent a USAGM CEO or Board from undertaking the same type of direction and oversight that those in equivalent leadership positions in an organization overseeing other reputable news organizations may provide, in a manner consistent with the highest standards of professional journalism. *Id.* section 531.3(e)(3).

D. The Regulation Is in Tension With USAGM's Statutory Mandate and Article II

There is a significant tension between the Regulation on the one hand, and USAGM's statutory mandate and the CEO's responsibilities and powers under statute and Article II on the other.

The Regulation relies solely on section 305(b) of the IBA for its conclusion that ''USAGM networks necessarily enjoy full editorial independence in order to maintain their 'professional independence and integrity.' '' *Id.* § 531.1(a).

But section 305(b) clearly does not use the terms ''respect'' or ''independence'' in anything approaching the concept of structural, managerial, or policy independence, or the manner in which those terms may apply to any given private news network. Rather, the statutory reference to ''professional independence'' requires the preservation of professionalism and technical excellence. *See, e.g., Oxford English Dictionary* (''professional'': ''[c]haracteristic of or suitable for a professional person''; ''[t]hat has or displays the skill, knowledge, experience, standards, or expertise of a professional; competent, efficient''; ''[t]hat has knowledge of the theoretical or scientific parts of a trade or occupation, as distinct from its practical or mechanical aspects''; ''that raises a trade to a learned profession''); *see also, e.g.,* 22 U.S.C. 6202(a)(5) (requiring United States international broadcasting to ''be conducted in accordance with the highest professional standards of broadcast journalism''); *Id.* section 6202(a)(6)–(7) (requiring broadcasting to ''be based on reliable information'' and ''be designed so as to effectively reach a significant audience''); *Id.* section 6202(b) (mandating, *e.g.,* the provision of ''news which is consistently reliable and authoritative, accurate, objective, and comprehensive,'' presentations that are ''clear and effective,'' and ''reliable research capacity'').

By its terms, the IBA's reference to ''professional independence'' is distinct from other statutory provisions purporting to establish entities independent from managerial or policy control or significant executive supervision. The phrase ''professional independence'' appears nowhere else in the United States Code. Statutory uses of the term ''independen[t]'' reference separate or freestanding entities, in contrast, and typically employ just the standalone adjective ''independent'' or ''independence.'' *See, e.g.,* 5 U.S.C. 105 (''For the purpose of this title, 'Executive agency' means an Executive department, a Government corporation, and an *independent* establishment.'' (emphasis added)); 24 U.S.C. 30 (''head of the department or *independent* agency'' (emphasis added)); 42 U.S.C. 1962b–1(b) (''each Federal department or *independent* agency'' (emphasis added)); 44 U.S.C. 1907 (referencing ''executive departments'' and ''independent agencies'').

Further, as discussed, USAGM Networks are statutorily prohibited from competing with private ''United States broadcasters'' and other ''state supported broadcasting'' from democratic nations, and they cannot seek to influence public opinion in the United States. 22 U.S.C. 6202(a)(3)–(4); *id.* section 1461–1a(a). Conversely, the USAGM Networks are required to program specific content to meet ''[the] needs which remain unserved by the totality of media voices available to the people of certain nations,'' (*Id.* section 6202(b)(5)) and ''[i]nclude clear and effective presentation of the policies of the United States Government and responsible discussion and opinion on those policies.'' (*Id.* section 6202(b)(3)).

The IBA provides that the CEO must, among other things, ''direct and supervise all [USAGM] broadcasting activities''; ''review and evaluate the mission and operation of, and to assess the quality, effectiveness, and professional integrity of, all such activities within the context of the broad foreign policy objectives of the United States''; and ''ensure that United States international broadcasting is conducted in accordance with [certain] standards and principles,'' including that such broadcasting ''shall . . . be consistent with the broad foreign policy objectives of the United States,'' ''be consistent with the international telecommunications policies and treaty obligations of the United States,'' and ''be conducted in accordance with the highest professional standards of

[4] *See also Harlow* v. *Fitzgerald,* 457 U.S. 800, 812 n.19 (1982) (conducting foreign affairs a ''central'' ''domain'' of the President); *Dep't of Navy* v. *Egan,* 484 U.S. 518, 529 (1988) (quoting *Haig* v. *Agee,* 453 U.S. 280, 293–94 (1981)); *Ludecke* v. *Watkins,* 335 U.S. 160, 173 (1948) (holding that the President is the nation's ''guiding organ in the conduct of our foreign affairs'').

broadcast journalism.'' *Id.* section 6202(a)(1)–(2), (5), 6204(a)(1)–(3). The IBA does not prohibit USAGM or the CEO from supervising the broadcasting networks; to the contrary, the IBA *requires* that the CEO oversee those networks for consistency with United States foreign policy and international treaty obligations, as well as the journalistic integrity of their operations. It is difficult to see how the CEO could fully discharge these statutory responsibilities under the Regulation, which prohibits him from ''direct[ing] . . . USAGM networks . . . in the performance of their journalistic and broadcasting duties and activities.'' 22 CFR 531.3(c).

Finally, nothing in the IBA purports to authorize USAGM Networks to engage in broadcasting activities that would impair the President's conduct of foreign affairs as '''the sole organ of the federal government in the field of international relations.''' *Curtiss-Wright Exp. Corp.,* 299 U.S. at 320 (internal citation omitted); *See also Id.* 22 U.S.C. 6202(a)(1) (requiring United States International Broadcasting to be ''consistent with the broad foreign policy objectives of the United States''); 22 U.S.C. 6209b (The CEO also ''shall regularly consult with and seek from the Secretary of State guidance on foreign policy issues.'').

But the Regulation's blanket prohibition on Executive Branch activities that affect editorial decision making—seemingly in all circumstances and for any reason—could improperly cabin the Executive Branch's ability to protect and advance its interests in foreign affairs, as necessary.

A proper analysis of section 305(b) should have taken into account the relationship between that provision and USAGM's statutory responsibility to oversee United States international broadcasting networks, as well as the President's authority to conduct foreign affairs. The Regulation failed to consider these relevant factors in its analysis, and instead incorrectly read section 305(b) in isolation to be a bar to effective supervision.

* * * * *

A few examples, including those observed from USAGM's experience operating under the Regulation, illustrate that the Regulation is unworkable because it undermines the ability of USAGM to discharge its core statutorily mandated functions.

1. USAGM's statutory mandate and Article II necessarily *require* USAGM—at times—to control content. Yet directly mandating particular content would seem within the Regulation's prohibition.

This limitation creates tension with USAGM's proper role in those scenarios that, under USAGM's mandate, would *require* it to regulate content. Determining USAGM's proper role and assessing USAGM's ability to carry out its statutory mandate under the current Regulation can be unclear and generates operational uncertainty.

For example, could the CEO direct the newsroom to withhold a story that posed a clear and present danger to national security or to the survival of United States military personnel? Arguably, the Regulation prohibits such direction. *See, e.g.,* 22 CFR 531.3(b) (''[A] firewall exists between anybody involved with any aspect of journalism (*e.g.,* the creation, editing, reporting, distributing, etc., of content) and everyone else in the organization.'').[5] VOA has previously taken the position that the aspect of the ''firewall'' prohibiting control over content is absolute. *See* Steven Springer, *Transcript of Editorial Firewall Session,* at 5 (May 17, 2018) (''Really can't get any more basic than that. Basically it's saying no one from the US government, no agency or official, can reach in and interfere with our work. Very plain and simple.''). That absolute position collides with USAGM's statutory mission and Article II. But so long as the Regulation exists, it creates operational uncertainty that has slowed down or otherwise interfered with necessary action.

2. Absent the ability to enforce basic standards of conduct through investigations and discipline, USAGM cannot effectively discharge its statutory duties, such as to ''direct and supervise all broadcasting activities,'' ''review and evaluate the mission and operation of, and to assess the quality, effectiveness, and professional integrity'' of USAGM Network broadcasts, and ''ensure that United States international broadcasting is conducted in accordance with the standards and principles'' set forth in the IBA governing journalistic standards. 22 U.S.C. 6204(a)(1)–(3).

For example, some argue that the Regulation bars the CEO from promulgating policies governing employee conduct, such as the existing USAGM Social Media Policy, USAGM, V–A BAM 530-Social Media Policy (July 8, 2019). *See, e.g.,* Elliot Engel, *Engel Statement on USAGM Officials Breaching the ''Firewall'' and Targeting VOA Journalist* (Oct. 5, 2020). But this creates an unworkable situation because the CEO is required to ''ensure'' adherence to broadcasting standards and to ''direct'' and ''supervise'' *all* broadcasting activities. 22 U.S.C. 6204(a)(1), (3). Personal social media posts by journalists can affect their ''[f]airness, objectivity & balance'' (VOA Best Practices Guide, at 8–9 (June 2020)) which in turn are components of ''the highest professional standards of broadcast journalism.'' 22 U.S.C. 6202(a)(5); *see also* The New York Times, *Social Media Policy* (Oct. 13, 2017). Such posts can undermine all USAGM Networks and accordingly justify heightened governmental restrictions on reporters' conduct. *See Navab-Safvavi* v. *Glassman,* 637 F.3d 311, 317 (D.C. Cir. 2011) (regulating private speech of VOA journalists necessary to achieve particularly strong governmental interest in presenting a clear message on United States foreign policy).

For there to be effective management of the USAGM Networks (or simply consistency in this area), the CEO must have authority to set and enforce such policies. But again, the Regulation injects a great deal of ambiguity and confusion. This ambiguity stalls, and sometimes stops, important action critical to USAGM Network operations. This, too, counsels for repeal of the Regulation.

3. Similarly, the CEO has express statutory authority ''[t]o redirect or reprogram funds within the scope of any grant or cooperative agreement, or between grantees, as necessary.'' 22 U.S.C. 6204(a)(21). But making the decision to drastically reduce or increase a grantee's budget based on an acute, critical foreign policy need of the United States could arguably ''influence'' ''journalistic and broadcasting duties and activities,'' as prohibited by the Regulation. 22 CFR 531.3(c). And there is at least a question about whether such action falls under

[5] The assertion that the Regulation bars *any* restriction of content is particularly striking because throughout American history, the private press have at times acceded to requests from the Executive Branch to refrain from the publication of certain material that, if otherwise distributed, would have imperiled United States national interests. For example, during armed conflict, newspapers and other outlets, complying with government appeals, have withheld information involving troop positions as well as imminent tactics, protecting the lives of American men and women in uniform. *See, e.g.,* Gabriel Schoenfeld, *Necessary Secrets: National Security, the Media, and the Rule of Law* (New York, New York: W.W. Norton 2010); Daniel Smyth, *Avoiding Bloodshed? US Journalists and Censorship in Wartime,* War & Society. Vol. 32, Iss. 1. 2013. At other times, the reason for refraining from the publication of specific content has arisen from concerns involving America's security more broadly. For example, the *New York Times* complied with government requests in 2004 by holding an article about the National Security Agency's Terrorist Surveillance Program for more than a year due to a ''convincing national security argument.'' Byron Calame, *More on the Eavesdropping Article,* The Public Editor's Journal, *New York Times* (Dec. 31, 2005).

the Regulation's general exception. If it does not, the Regulation runs into the sound policy reason underlying the statute: USAGM must be able to reprogram funds quickly to focus resources on global hotspots as crises suddenly unfold in order to tell America's story where it matters most. *Cf.* 22 U.S.C. 6202(b)(4) (requiring that United States international broadcasting have ''the capability to provide a surge capacity to support United States foreign policy objectives during crises abroad''). This uncertainty and tension further counsel repeal of the Regulation.

* * * * *

The foregoing examples demonstrate that the Regulation is unworkable in the context of managing USAGM consistently with the CEO's statutory mandate and the Agency's purposes, and should therefore be repealed.

III. The Regulation's Vagueness Also Renders It Unworkable

The Regulation is so vague that it creates immense difficulty for USAGM officials attempting to determine the rules by which their conduct will be judged. This lack of ''fair notice'' and operational functionality has burdened the CEO and other USAGM officials in the discharge of their duties—and will continue to do so unless and until it is repealed. Vagueness delays action that requires expedition and needlessly consumes substantial scarce resources better spent elsewhere.[6] Operationally, this vagueness renders the Regulation unworkable and further counsels its repeal.

A. The Regulation's Prohibition

The Regulation reaches *any* conduct to ''direct, pressure, coerce, threaten, interfere with, or otherwise impermissibly influence'' *any* staff within the ''newsroom'' ''in the performance of their journalistic and broadcasting duties and activities.'' 22 CFR 531.3(c). This language sweeps in a substantial range of actions by the CEO and USAGM staff, but it is not clear which, or to what degree. Several key definitions make clear its problematic vagueness.

1. The range of actions that *could* be construed to constitute an ''attempt'' to ''direct, pressure, coerce, threaten, interfere with, or otherwise impermissibly influence'' is undefined. What constitutes such an attempt? What constitutes ''coercion,'' ''pressure,'' or ''interfere[nce]''? Must it be objective or subjective? If objective, objective against what standard? And what renders an influence ''impermissabl[e]''? What degree of causal connection must there be between action and effect? What work does performance of ''journalistic and broadcasting duties and activities'' capture? All the work of federal employees in the ''newsroom''? Or just some of it? The Regulation does not clearly answer these questions.

2. What constitutes the ''newsroom''? The Regulation initially defines that term as the news division of a USAGM-Network. The scope of the news division depends on the structure of the Network. Depending how a Network is organized the head of that Network may or may not be considered to be within the news division. The Board of a Network is considered to be outside the news division. Those within the news division must adhere to the highest professional standards of journalism in carrying out their responsibilities. Even if outside the newsroom, as set forth herein, the head of a network is still required to act in accordance with the highest standards of professional journalism in carrying out their roles with respect to the journalism, and thus ensuring the professional ''independence and integrity'' of the network. *Id.* § 531.4(e).

But this definition is supplemented by a second definition of the ''newsroom'' in the definition of those outside the ''firewall.'' Under *that* definition, the newsroom is also composed of anyone who, under the ''highest standards of professional journalism,'' is ''involved with carrying out any aspect of journalism (*e.g.,* the creation, editing, reporting, distributing, etc., of content) . . . .'' *Id.* § 531.4(c).

This distinction matters substantively. Under a pure structural approach, a publisher is likely outside of the newsroom's organizational chart. But looking to the publisher's substantive role, the publisher may ''edit'' stories under unusual circumstances, such as when a story is controversial or if there is concern about a libel action.

The second definition interjects substantial ambiguity. Two examples illustrate this point.

No serious newspaper allows the publication of material likely to result in a libel action without legal review. Assume the lawyer who reviews the story ''edits'' for legal reasons. Does the lawyer sit inside the newsroom? Almost certainly not. The lawyer ''edits'' the story, but not within the realm of the day-to-day ''editing'' conception of the word ''editing.'' It is a special type of ''editing.'' Is that example inapposite, as it is not an everyday ''common'' usage of the term ''edit,'' or does the term ''edit'' receive a broad definition? The Regulation does not provide an answer. Looking to the predicate clause regarding the ''highest standards of professional journalism'' is circular—almost all reputable newspapers subject certain stories to heightened legal review and a lawyer might ''edit'' in that limited circumstance. Does the term vary with the story, *i.e.,* is the lawyer within the newsroom only as to those stories the lawyer ''edits''?

Most broadcasters have program directors that sit outside of the Newsroom. But when stories involve matters of critical import, or are highly controversial, program directors can and do step in and ''edit'' or otherwise provide controls. But again, this is a special sort of ''extra'' editorial review that is outside the normal instance. So the analysis above applies.

B. The Regulation's General Exception

The ambiguity as to what the Regulation prohibits is compounded by the general *exception* in the Regulation, that the CEO *can* ''undertak[e] the same type of direction and oversight that those in equivalent leadership positions in an organization overseeing other reputable news organizations may provide.'' 22 CFR 531.3(e)(3). This exception, too, is unclear.

For starters, what is a ''reputable news organization''? The Regulation's definition does not answer the question, defining that term as ''a news organization that adheres to the highest professional standards of journalism and has a firewall which insulates the news side of the operation to ensure that editorial decisions are not influenced in a manner or by factors inconsistent with the highest standards of professional journalism.'' *Id.* § 531.4(i). The term ''highest professional standards of journalism'' is then defined as ''highest professional standards in the field of journalism.'' *Id.* § 531.4(f). This does not provide clear guidance.

Moreover, within that definition, how does one define the term ''firewall''? Are there variations in what constitutes an acceptable ''firewall''? How does one determine what is permissible ''direction'' or ''oversight''? If news organizations disagree, which standards control, and how is that decided? Is the reference to American ''news organizations'' or does one look to foreign nations? This last question is particularly important, as different nations—even those who share a strong tradition of a free press—have different traditions regarding some journalistic standards. For example, Britain is

[6] To be sure, USAGM's interpretation of its own regulations receives deference. *See Auer* v. *Robbins,* 519 U.S. 452 (1997). But that merely mitigates—and does not solve—the substantial operational issues flowing from the uncertainties caused by the breadth and ambiguity of the Regulation.

democratic and has a strong and storied tradition of a free press. But its libel laws are much more plaintiff-friendly. Some British papers reflect this in terms of the publisher's authority over the newsroom.

* * * * *

At the end of the day, the Regulation creates substantial hurdles to everyday USAGM operations through its lack of clarity. Under the Regulation *any* decision that could engender controversy and could somehow be argued to violate Regulation, must go through a long and time consuming legal and operational review—no matter how minor the decision. This is contrary to the purposes of a regulation of internal agency procedure, which should be to clarify and facilitate agency operations. It also undermines the purpose of centralizing control of USAGM in a single CEO. These points strongly support repeal of the Regulation.

Repeal due to the Regulation's vagueness is also supported by another related fundamental factor—accountability. The Regulation's vagueness breaks and obfuscates clear lines of authority and accountability within the organization. For example, if United States Government employees can break a story by knowingly and willfully publishing classified information, the voters and Congress should know why, and most importantly, whose call it was. And if the President or his officers decide against taking such a risk, they should have the clear ability to do so and to ensure that the decision is carried out by the organization.

Conclusion

The Regulation was voted on by the BBG via an email notation vote hours before the CEO was confirmed by the United States Senate. The putative statutory basis for the Regulation has existed for many years and USAGM: (1) Did not promulgate a regulation during that time; and (2) did not seem to suffer any major issues—on this point—for want of a regulation. The Regulation is repealed.

Effective Date

Analogous to the immediate operation of the Regulation now being repealed, this repeal is already effective upon the Agency having been promulgated by the CEO. *Cf. Firewall and Highest Standards of Professional Journalism,* 85 FR 36151. Publication will codify the repeal into the **Federal Register**. Those provisions pertaining to non-supervisory employees deemed subject to collective bargaining requirements set forth under the Federal Service Labor-Management Relations Statute and the Agency's negotiated labor-management agreements would only become effective subject to the terms and conditions within those bargaining agreements.

Rulemaking Requirements

1. This final rule has been determined to be exempt from review for purposes of Executive Order 12866.

2. This rule does not impose information collection and recordkeeping requirements. Consequently, it need not be reviewed by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1995.

3. This rule does not contain policies with federalism implications as this term is defined in Executive Order 13132.

4. The provisions of the Administrative Procedure Act (5 U.S.C. 553, *et seq.,*) requiring notice of proposed rulemaking, the opportunity for public participation, and a delay in effective date, are inapplicable because, just like the underlying regulation hereby being repealed (*Firewall and Highest Standards of Professional Journalism,* 85 FR at 36151), this rule involves a rule of agency organization, procedure, or practice. (5 U.S.C. 553(b)(A)). Further, no other law requires that a notice of proposed rulemaking and an opportunity for public comment be given for this final rule. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule under 5 U.S.C. or by any other law, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601, *et seq.*) are not applicable. Accordingly, this rule is issued in final form. Although there is no formal comment period, public comments on this rule are welcome on a continuing basis. Comments should be submitted to Daniel Rosenholtz, 330 Independence Avenue SW, Washington, DC 20237 (email at: *Rule_Comments@usagm.gov*).

List of Subjects in 22 CFR Part 531

Conflict of interest, Communications, News media.

Authority and Issuance

For the foregoing reasons, pursuant to the Chief Executive Officer's authorities under the U.S. International Broadcast Act (22 U.S.C. 6201, *et seq.*), the United States Agency for Global Media amends 22 CFR chapter V as follows:

■ 1. Revise the heading for chapter V to read as follows:

Chapter V—UNITED STATES AGENCY FOR GLOBAL MEDIA

PART 531—[Removed and Reserved]

■ 2. Remove and reserve part 531.

Michael Pack,

Chief Executive Officer, U.S. Agency for Global Media.

[FR Doc. 2020–24736 Filed 12–9–20; 8:45 am]

BILLING CODE 8610–01–P

POSTAL SERVICE

39 CFR Part 501

Authorization To Manufacture and Distribute Postage Evidencing Systems; Correction

AGENCY: Postal Service™.

ACTION: Correcting amendments.

SUMMARY: On December 4, 2020, the Postal Service published a final rule concerning decertifying and withdrawing all non-Intelligent Mail Indicia compliant Postage Evidencing Systems. That document incorrectly listed the date decertified indicia may not be recognized as valid postage for use or refunds in one section of the rule edits. This document corrects the final regulation.

DATES: This correcting amendment is effective December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Ezana Dessie, Principal Business Systems Analyst, *Ezana.Dessie@usps.gov,* (202) 268–5686.

SUPPLEMENTARY INFORMATION: In the final rule published on December 4, 2020, 85 FR 78234, in § 501.20, the Postal Service listed the effective date that decertified indicia may not be recognized as valid postage for use or refunds as June 20, 2025. This should instead read June 30, 2025. The Postal Service makes this change below.

List of Subjects in 39 CFR Part 501

Administrative practice and procedure, Postal Service.

For the reasons stated in the preamble, the Postal Service corrects 39 CFR part 501 by making the following correcting amendment:

PART 501—[AMENDED]

■ 1. The authority citation for part 501 continues to read as follows:

Authority: 5 U.S.C. 552(a); 39 U.S.C. 101, 401, 403, 404, 410, 2601, 2605; Inspector General Act of 1978, as amended (Pub. L. 95–452, as amended); 5 U.S.C. App. 3.

■ 2. Amend § 501.20 by revising paragraph (b) to read as follows:

§ 501.20 Discontinued Postage Evidencing Indicia.

* * * * *

(b) Effective December 31, 2024 all Postage Evidencing Systems that do not to produce Intelligent Mail Indicia (IMI) for evidence of pre-paid postage must be withdrawn from service. Non-IMI indicia, which are not compliant with the then-current version of the IMI–PC, will be decertified and may not be used as a valid form of postage evidence. These decertified indicia may not be recognized as valid postage for use or refunds, after June 30, 2025.

Ruth Stevenson,

Attorney, Federal Compliance.

[FR Doc. 2020–27100 Filed 12–7–20; 11:15 am]

BILLING CODE P

Proposed Rules

Federal Register

Vol. 85, No. 238

Thursday, December 10, 2020

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.

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

[NRC–2020–0253]

Advanced Manufacturing Technologies Subtask 2A

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of withdrawal and reissuance; public meeting and request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) published a draft document entitled ''Implementation of Quality Assurance Criteria and 10 CFR 50.59 for Nuclear Power Plant Components Produced Using Advanced Manufacturing Technologies'' for public comments in the **Federal Register** on November 30, 2020. The document addresses the application of quality assurance (QA) criteria and NRC's requirements in its regulations regarding, ''Changes, tests and experiments,'' to the implementation of Advanced Manufacturing Technologies (AMT)-fabricated components in U.S. nuclear power plants. This notice withdraws the November 30, 2020, notice in its entirety and reissues the notice to include additional explanatory information, extend the comment period to 60 days, and correct the Agencywide Documents Access and Management System (ADAMS) accession number for the draft document.

DATES: The Nuclear Regulatory Commission is withdrawing the proposed rule published November 30, 2020 (85 FR 76489); and reissuance of the draft document takes effect on December 10, 2020. Submit comments on the draft document by February 8, 2021.

Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. The NRC will hold a public meeting as an online webinar. See Section IV. Public Meeting, of this document for additional information.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject); however, the NRC encourages electronic comment submission through the Federal Rulemaking website:

- *Federal Rulemaking Website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2020–0253. Address questions about Docket IDs in *Regulations.gov* to Jennifer Borges; telephone: 301–287–9127; email: *Jennifer.Borges@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *Mail comments to:* Office of Administration, Mail Stop: TWFN–7–A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see ''Obtaining Information and Submitting Comments'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Isaac Anchondo-Lopez, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 817–200–1152; email: *Isaac.Anchondo-Lopez@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2020–0253 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- *Federal Rulemaking Website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2020–0253.
- *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 draft document entitled ''Implementation of Quality Assurance Criteria and 10 CFR 50.59 for Nuclear Power Plant Components Produced Using Advanced Manufacturing Techniques'' can be found by searching for ADAMS Accession No. ML20317A007.
- *Attention:* The PDR, where you may examine and order copies of public documents is currently closed. You may submit your request to the PDR via email at *pdr.resource@nrc.gov* or call 1–800–397–4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal Rulemaking website (*https://www.regulations.gov*). Please include Docket ID NRC–2020–0253 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at *https://www.regulations.gov* as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Additional Information

The NRC is withdrawing **Federal Register** Document 2020–26272 issued on November 30, 2020 (85 FR 76489), and is reissuing the notice in its entirety to include additional information, extend the comment period to 60 days, and correct the ADAMS Accession Number of the draft document entitled

''Implementation of Quality Assurance Criteria and 10 CFR 50.59 for Nuclear Power Plant Components Produced Using Advanced Manufacturing Technologies'' (ADAMS Accession No. ML20317A007).

III. Background

The NRC considers AMTs to consist of material processing and component fabrication methods that have not been traditionally used in the U.S. nuclear industry and have not yet received NRC approval through NRC-endorsed codes and standards or the approval of an industry submittal. There are several regulatory paths available to a licensee for utilizing an AMT in a nuclear application, including: (1) Development of a Code or Standard that can be incorporated by reference in section 50.55a of chapter I of title 10 of the *Code of Federal Regulations* (10 CFR); (2) selection of an unregulated in-service application; (3) submission of generic technical reports or plant-specific submittals for NRC approval; or (4) implementation of the 10 CFR 50.59, ''Changes, tests and experiments,'' 10 CFR 70.72, ''Facility changes and change process,'' or 10 CFR 72.48, ''Changes, tests, and experiments'' processes. Industry indicated that plans for the initial installation of AMT-fabricated components would involve the 10 CFR 50.59 process. Therefore, the NRC staff documented in the draft document a description of the processes, consistent with the QA requirements in Appendix B to 10 CFR part 50 and in accordance with 10 CFR 50.59 in order to support the staff's performance of potential inspections of a licensee's implementation of these requirements for AMT-fabricated components.

IV. Specific Considerations

This report documents completion of the staff's initial review of QA criteria and 10 CFR 50.59 requirements for AMT applications at U.S. nuclear power plants. This report does not represent a complete and final analysis of all aspects of QA criteria and 10 CFR 50.59 requirements and guidance that might be applicable to the use of AMT components at U.S. nuclear power plants. This report does not create new regulatory requirements or establish new regulatory positions with respect to the use or manufacture of AMT components for nuclear power plants. The scope of this report is limited to the review of existing requirements and guidance to address AMT components and the consideration of potential regulatory and technical challenges. This report may be subject to future revision, as additional insights and operating experience for use of AMT components are gained.

In its effort to be open and transparent regarding potential processes for the installation of AMT-fabricated components, the NRC is requesting general comments on this document.

V. Public Meeting

The NRC plans to hold a public meeting during the public comment period for this action. A public meeting is planned for January 2021, via online webinar. The public webinar will provide a forum for the NRC staff to discuss the document and for members of the public to provide comments on the document. The NRC does not intend to provide any responses to comments submitted during the public webinar. The public webinar will be noticed on the NRC's public meeting website at least 10 calendar days before the meeting. Members of the public should monitor the NRC's public meeting website for additional information about the public webinar at *https://www.nrc.gov/public-involve/public-meetings/index.cfm.* The NRC will post the notice for the public webinar and may post additional material related to this action to the Federal Rulemaking website at *https://www.regulations.gov/* under Docket ID NRC–2020–0253. The Federal Rulemaking website allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) Navigate to the docket folder (NRC–2020–0253); (2) click the ''Sign up for Email Alerts'' link; and (3) enter your email address and select how frequently you would like to receive emails (daily, weekly, or monthly).

Dated: December 2, 2020.

For the Nuclear Regulatory Commission.

Anna H. Bradford,

Director, Division of New and Renewed Licenses, Office of Nuclear Reactor Regulation.

[FR Doc. 2020–26845 Filed 12–9–20; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–1114; Project Identifier 2019–SW–058–AD]

RIN 2120–AA64

Airworthiness Directives; Airbus Helicopters

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 Helicopters Model EC120B helicopters. This proposed AD was prompted by a report of broken and bent attachment bolts of the main rotor (MR) hub scissors assembly. This proposed AD would require an inspection of the attachment bolts of the MR hub scissors assembly for discrepancies and repair if necessary; part marking of the attachment bolts of the MR hub scissors assembly; and repetitive inspections of the part marking of the attachment bolts, and repair if necessary; as specified in a European Union Aviation Safety Agency (EASA) AD, which will be incorporated by reference. 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 January 25, 2021.

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 *https://www.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.

For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 89990 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this IBR material on the EASA website at *https://ad.easa.europa.eu.* You may view this IBR 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 in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1114.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for

and locating Docket No. FAA–2020–1114; 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, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Hal Jensen, Aerospace Engineer, Operational Safety Branch, FAA, 470 L'Enfant Plaza SW, Washington, DC 20024; telephone 202–267–9167; email *hal.jensen@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 **ADDRESSES**. Include ''Docket No. FAA–2020–1114; Project Identifier 2019–SW–058–AD'' 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 *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposal.

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 Hal Jensen, Aerospace Engineer, Operational Safety Branch, FAA, 470 L'Enfant Plaza SW, Washington, DC 20024; telephone 202–267–9167; email *hal.jensen@faa.gov.* Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Discussion

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2019–0139, dated June 12, 2019 (EASA AD 2019–0139) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Airbus Helicopters Model EC120B helicopters.

This proposed AD was prompted by a report of broken and bent attachment bolts of the MR hub scissors assembly. The FAA is proposing this AD to address broken and bent attachment bolts of the MR hub scissors assembly, which could lead to detachment of a MR hub scissors attachment bolt, possibly resulting in complete loss of control of the helicopter. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

EASA AD 2019–0139 describes procedures for an inspection of the attachment bolts of the MR hub scissors assembly for discrepancies (discrepancies include corrosion, fretting, wear, cracking, bolt play, and bolt tightening torque); and repair if necessary; part marking of the attachment bolts of the MR hub scissors assembly; and repetitive inspections, after part marking, of the attachment bolts for discrepancies, and repair if necessary. The inspections of the attachment bolts of the MR hub assembly include checking the play and torque of the scissors attachment bolts and making sure that there are no hard spots in the scissors link hinge.

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 and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in EASA AD 2019–0139, described previously, as incorporated by reference, except for any differences identified as exceptions in the regulatory text of this AD.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA initially worked with Airbus and EASA to develop a process to use certain EASA ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has since coordinated with other manufacturers and civil aviation authorities (CAAs) to use this process. As a result, EASA AD 2019–0139 will be incorporated by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2019–0139 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 the EASA AD 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 the EASA AD. Service information specified in EASA AD 2019–0139 that is required for compliance with EASA AD 2019–0139 will be available on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1114 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this proposed AD affects 160 helicopters 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
5 work-hours × $85 per hour = $425	$0	$425	$68,000

The FAA estimates that it would take about 1 hour per product to comply with the proposed reporting requirement in this proposed AD. The average labor rate is $85 per hour. Based on these figures, the FAA estimates the cost of reporting on U.S. operators to be $13,600, or $85 per product.

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 helicopters that might need these on-condition actions:

ESTIMATED COSTS OF ON-CONDITION ACTIONS

Labor cost	Parts cost	Cost per product
4 work-hours × $85 per hour = $340	$40	$380

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this proposed AD is 2120–0056. The paperwork cost associated with this proposed AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this proposed AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177–1524.

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) 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 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 Helicopters: Docket No. FAA–2020–1114; Project Identifier 2019–SW–058–AD.

(a) Comments Due Date

The FAA must receive comments by January 25, 2021.

(b) Affected Airworthiness Directives (ADs)

None.

(c) Applicability

This AD applies to Airbus Helicopters Model EC120B helicopters, certificated in any category, having an affected part as defined in European Union Aviation Safety Agency (EASA) AD 2019–0139, dated June 12, 2019 (EASA AD 2019–0139).

(d) Subject

Joint Aircraft System Component (JASC) Code 6200, Main Rotor System.

(e) Reason

This AD was prompted by a report of broken and bent attachment bolts of the main rotor (MR) hub scissors assembly. The FAA is issuing this AD to address broken and bent attachment bolts of the MR hub scissors assembly, which could lead to detachment of a MR hub scissors attachment bolt, possibly resulting in complete loss of control of the helicopter.

(f) Compliance

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

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2019–0139.

(h) Exceptions to EASA AD 2019–0139

(1) Where EASA AD 2019–0139 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2019–0139 refers to September 5, 2018 (the effective date of EASA AD 2018–0186, dated August 29, 2018), this AD requires using the effective date of this AD.

(3) The ''Remarks'' section of EASA AD 2019–0139 does not apply to this AD.

(4) Where EASA AD 2019–0139 refers to flight hours (FH), this AD requires using hours time-in-service.

(5) Paragraphs (3) and (4) of EASA AD 2019–0139 refer to ''discrepancies.'' For this AD, discrepancies include corrosion, fretting, wear, cracking, bolt play, and bolt tightening torque.

(6) Although the service information referenced in EASA AD 2019–0139 specifies to discard certain parts, this AD does not include that requirement.

(7) Where EASA AD 2019–0139 specifies to contact the manufacturer for repair instructions, repair using a method approved by the Manager, Rotorcraft Standards Branch, FAA. For a repair method to be approved by the Manager, Rotorcraft Standards Branch, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(8) Paragraph (5) of EASA AD 2019–0139 specifies to report inspection results to Airbus Helicopters within a certain compliance time. For this AD, report inspection results at the applicable time specified in paragraph (h)(8)(i) or (ii) of this AD.

(i) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(ii) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(i) Alternative Methods of Compliance (AMOCs)

The Manager, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Manager, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; phone: 817–222–5110; email: *9-ASW-FTW-AMOC-Requests@faa.gov.*

(j) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120–0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory as required by this AD. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177–1524.

(k) Related Information

(1) For EASA AD 2019–0139, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 89990 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this EASA AD on the EASA website at *https://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. This material may be found in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1114.

(2) For more information about this AD, contact Hal Jensen, Aerospace Engineer, Operational Safety Branch, FAA, 470 L'Enfant Plaza SW, Washington, DC 20024; telephone 202–267–9167; email *hal.jensen@faa.gov.*

Issued on December 2, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–26965 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–1118; Project Identifier MCAI–2020–00516–E]

RIN 2120–AA64

Airworthiness Directives; Safran Helicopter Engines, S.A. (Type Certificate Previously Held by Turbomeca, S.A.) Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Safran Helicopter Engines, S.A. Arriel 2C, 2C1, 2S1, and 2S2 model turboshaft engines. This proposed AD was prompted by investigations by the manufacturer following level 1 failures in flight (minor anomalies) and level 2 failures on the ground (minor failures), where cracks were found on the soldered joints of torque conformation boxes. This proposed AD would require performing initial and repetitive inspections of the resistance values of the torque conformation box and, depending on the results of the inspections, replacement of the torque conformation box. 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 January 25, 2021.

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 *https://www.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.

For service information identified in this NPRM, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, Tarnos, France; phone: +33 (0) 5 59 74 45 11. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238–7759.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1118; 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 (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7134; fax: (781) 238–7199; email: *wego.wang@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 **ADDRESSES**. Include ''Docket No.

FAA–2020–1118; Project Identifier MCAI–2020–00516–E'' 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 *https://www.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 Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2019–0110, dated May 21, 2019 (referred to after this as ''the MCAI''), to address the unsafe condition on these products. The MCAI states:

> It was reported that, during investigations following level 1 failures in flight (minor anomalies) and level 2 failures on the ground (minor failures), cracks were found on the soldered joints of certain torque conformation boxes. Although no events in operation were reported of One Engine Inoperative (OEI) ratings maximum power unavailability, the failure mode analysis for these boxes demonstrated that such event could not be excluded. This condition, if not detected and corrected, could lead to engine in-flight shut-down, possibly resulting in reduced control of the helicopter.
>
> To address this potential unsafe condition, SAFRAN Helicopter Engines issued the SB [Service Bulletin], to provide instructions for repetitive checks of the box resistance values.
>
> For the reasons described above, this [EASA] AD requires repetitive checks of the affected part and, depending on findings, replacement of the affected part with a serviceable part.

You may obtain further information by examining the MCAI in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1118.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Safran Helicopter Engines Mandatory Service Bulletin (MSB) No. 292 72 2868, Version A, dated December 2018. The MSB describes procedures for performing an inspection of the resistance values of the torque conformation box. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in **ADDRESSES**.

Proposed AD Requirements in This NPRM

This proposed AD would require performing initial and repetitive inspections of the resistance values of the torque conformation box and, depending on the results of the inspections, replacement of the torque conformation box.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 257 engines installed on helicopters of U.S. registry.

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

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect resistance values of the torque conformation box.	1 work-hour × $85 per hour = $85	$0	$85	$21,845

The FAA estimates the following costs to do any necessary replacement that would be required based on the results of the proposed inspections. The agency has no way of determining the number of aircraft that might need this replacement:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replace the torque conformation box	1 work-hour × $85 per hour = $85	$1,841	$1,926

The FAA has included all known costs in its estimate. According to the manufacturer, however, some of the costs of this proposed 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

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:

Safran Helicopter Engines, S.A. (Type Certificate previously held by Turbomeca, S.A.): Docket No. FAA–2020–1118; Project Identifier MCAI–2020–00516–E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by January 25, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Safran Helicopter Engines, S.A. (Type Certificate previously held by Turbomeca, S.A.) Arriel 2C, 2C1, 2S1, and 2S2 model turboshaft engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7712, Engine BMEP/Torque Indicating.

(e) Unsafe Condition

This AD was prompted by investigations by the manufacturer following level 1 failures in flight (minor anomalies) and level 2 failures on the ground (minor failures), where cracks were found on the soldered joints of torque conformation boxes. The FAA is issuing this AD to prevent failure of the torque conformation box. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and loss of the helicopter.

(f) Compliance

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

(g) Required Actions

(1) For engines with the torque conformation box in pre-modification TU 34 configuration, installed on Arriel 2C and 2C1 model turboshaft engines; pre-modification TU 34 or post-modification TU 188 configuration, installed on Arriel 2S1 model turboshaft engines; or post-modification TU 188 configuration, installed on Arriel 2S2 model turboshaft engines:

(i) Within 600 engine hours (EHs) or 180 days after the effective date of this AD, whichever occurs first, perform an initial inspection of the resistance values of the torque conformation box.

Note 1 to paragraph (g)(1)(i): You may delay the initial inspection by up to 60 EHs to align with other scheduled maintenance tasks.

(ii) Thereafter, perform repetitive inspections of the resistance values of the torque conformation box before exceeding 600 EHs since the last inspection of the resistance values of the torque conformation box.

(2) Use the Accomplishment Instructions, paragraph 2.3.2 or 4.3.2, of Safran Helicopter Engines Mandatory Service Bulletin No. 292 72 2868, Version A, dated December 2018, to perform the inspections of the resistance values of the torque conformation box required by paragraph (g)(1) of this AD.

(3) If, during any inspection required by paragraph (g)(1) of this AD, a non-conforming resistance value is found, before further flight, remove the torque conformation box from service and replace it with a part eligible for installation.

(h) Definition

For the purpose of this AD, a ''part eligible for installation'' is a zero hour torque conformation box or a torque conformation box that has been inspected as required by paragraph (g)(1) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO 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 certification office, send it to the attention of the person identified in Related Information. You may email your request to: *ANE-AD-AMOC@faa.gov.*

(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.

(j) Related Information

(1) For more information about this AD, contact Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7134; fax: (781) 238–7199; email: *wego.wang@faa.gov.*

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2019–0110, dated May 21, 2019, for more information. You may examine the EASA AD in the AD docket at *https://www.regulations.gov* by searching for and locating it in Docket No. FAA–2020–1118.

(3) For service information identified in this AD, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, Tarnos, France; phone: +33 (0) 5 59 74 45 11. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238–7759.

Issued on December 4, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27053 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–1115; Project Identifier MCAI–2020–01230–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 A330–200

Freighter series airplanes. This proposed AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations, as specified in a European Union Aviation Safety Agency (EASA) AD, which is proposed for incorporation by reference. 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 January 25, 2021.

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 *https://www.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.

For material that will be incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this IBR material on the EASA website at *https://ad.easa.europa.eu.* You may view this IBR 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 in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1115.

Examining the AD Docket

You may examine the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1115; 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, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3229; email *vladimir.ulyanov@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–2020–1115; Project Identifier MCAI–2020–01230–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 the 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 *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

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 Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3229; email *vladimir.ulyanov@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.

Discussion

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2020–0190, dated August 27, 2020 (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI) (EASA AD 2020–0190), to correct an unsafe condition for all Airbus SAS Model A330–200 Freighter series airplanes, and Model A340–213 and –313 airplanes. Airplanes with an original airworthiness certificate or original export certificate of airworthiness issued after June 29, 2020 must comply with the airworthiness limitations specified as part of the approved type design and referenced on the type certificate data sheet; this AD therefore does not include those airplanes in the applicability.

EASA AD 2020–0190 specifies that it requires a task (limitation) already required by EASA AD 2018–0034 (which corresponds to FAA AD 2018–23–14, Amendment 39–19501 (83 FR 60754, November 27, 2018) (AD 2018–23–14)) and invalidates prior instructions for that task. This proposed AD would terminate the limitation for the nose landing gear lower torque link having part number D64001, as required by paragraph (g) of AD 2018–23–14, for Model A330–223F and –243F airplanes only.

This proposed AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. The FAA is proposing this AD to address fatigue cracking, accidental damage, or corrosion in principal structural elements, and possible failure of certain life limited parts, which could result in reduced structural integrity of the airplane. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

EASA AD 2020–0190 describes new or more restrictive airworthiness limitations for airplane structures and safe life limits.

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 and Requirements of This Proposed AD

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 the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI referenced above. The FAA is proposing this AD because the FAA has evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Proposed AD Requirements

This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations, which are specified in EASA AD 2020–0190 described previously, as incorporated by reference. Any differences with EASA AD 2020–0190 are identified as exceptions in the regulatory text of this AD and discussed under ''Differences Between this Proposed AD and the MCAI.''

This proposed AD would require revisions to certain operator maintenance documents to include new actions (*e.g.,* inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (k)(1) 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 initially worked with Airbus and EASA to develop a process to use certain EASA ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has since coordinated with other manufacturers and civil aviation authorities (CAAs) to use this process. As a result, EASA AD 2020–0190 will be incorporated by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2020–0190 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 the EASA AD 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 the EASA AD.

Service information specified in EASA AD 2020–0190 that is required for compliance with EASA AD 2020–0190 will be available on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1115 after the FAA final rule is published.

Airworthiness Limitation ADs Using the New Process

The FAA's process of incorporating by reference MCAI ADs as the primary source of information for compliance with corresponding FAA ADs has been limited to certain MCAI ADs (primarily those with service bulletins as the primary source of information for accomplishing the actions required by the FAA AD). However, the FAA is now expanding the process to include MCAI ADs that require a change to airworthiness limitation documents, such as airworthiness limitation sections.

For these ADs that incorporate by reference an MCAI AD that changes airworthiness limitations, the FAA requirements are unchanged. Operators must revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in the new airworthiness limitation document. The airworthiness limitations must be followed according to 14 CFR 91.403(c) and 91.409(e).

The previous format of the airworthiness limitation ADs included a paragraph that specified that no alternative actions (*e.g.,* inspections) or intervals may be used unless the actions and intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in the AMOCs paragraph under ''Other FAA Provisions.'' This new format includes a ''New Provisions for Alternative Actions and Intervals'' paragraph that does not specifically refer to AMOCs, but operators may still request an AMOC to use an alternative action or interval.

Differences Between This Proposed AD and the MCAI

This proposed AD does not include the Model A340–213 and –313 airplanes that are specified in the MCAI. Instead, the FAA has added the MCAI to the required airworthiness actions list (RAAL) for the Model A340 airplanes.

Costs of Compliance

The FAA estimates that this proposed AD affects 6 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

The FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the agency estimates the average total cost per operator to be $7,650 (90 work-hours × $85 per work-hour).

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 has 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) 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 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–2020–1115; Project Identifier MCAI–2020–01230–T.

(a) Comments Due Date

The FAA must receive comments by January 25, 2021.

(b) Affected Airworthiness Directives (ADs)

The AD affects AD 2018–23–14, Amendment 39–19501 (83 FR 60754, November 27, 2018) (AD 2018–23–14).

(c) Applicability

This AD applies to Airbus SAS Model A330–223F and –243F airplanes, certificated in any category, with an original airworthiness certificate or original export certificate of airworthiness issued on or before June 29, 2020.

(d) Subject

Air Transport Association (ATA) of America Code 05, Time Limits/Maintenance Checks.

(e) Reason

This AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. The FAA is issuing this AD to address fatigue cracking, accidental damage, or corrosion in principal structural elements, and possible failure of certain life limited parts, which could result 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 paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2020–0190, dated August 27, 2020 (EASA AD 2020–0190).

(h) Exceptions to EASA AD 2020–0190

(1) The requirements specified in paragraph (1) of EASA AD 2020–0190 do not apply to this AD.

(2) Paragraph (2) of EASA AD 2020–0190 specifies revising ''the approved AMP'' within 12 months after its effective date, but this AD requires revising the existing maintenance or inspection program, as applicable, to incorporate the ''limitations'' specified in paragraph (2) of EASA AD 2020–0190 within 90 days after the effective date of this AD.

(3) The initial compliance time for doing the tasks specified in paragraph (2) of EASA AD 2020–0190 is on or before the applicable ''limitations'' specified in paragraph (2) of EASA AD 2020–0190, or within 90 days after the effective date of this AD, whichever occurs later.

(4) The provision specified in paragraph (3) of EASA AD 2020–0190 does not apply to this AD.

(5) The ''Remarks'' section of EASA AD 2020–0190 does not apply to this AD.

(i) Provisions for Alternative Actions or Intervals

After the existing maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (*e.g.,* inspections) or intervals are allowed unless they are approved as specified in the provisions of the ''Ref. Publications'' section of EASA AD 2020–0190.

(j) Terminating Action for Certain Requirements of AD 2018–23–14

Accomplishing the revision required by this AD terminates the limitation for the nose landing gear lower torque link having part number D64001, as required by paragraph (g) of AD 2018–23–14, for Model A330–223F and –243F airplanes only.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, 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 Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (l)(2) of this AD. Information may be emailed to: *9-AVS-AIR-730-AMOC@faa.gov.* 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.

(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, Large Aircraft Section, 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) Required for Compliance (RC): Except as required by paragraph (k)(2) of this AD, if any service information 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.

(l) Related Information

(1) For information about EASA AD 2020–0190, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this EASA AD on the EASA website at *https://ad.easa.europa.eu.* 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. This material may be found in the AD docket on the internet at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–1115.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3229; email *vladimir.ulyanov@faa.gov.*

Issued on December 3, 2020.

Gaetano A. Sciortino,

Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–26942 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2020–0831; Project Identifier 2019–CE–031–AD]

RIN 2120–AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation (Gulfstream) Model GV airplanes. This

proposed AD was prompted by notification of corrosion present in floor beam support links. This proposed AD would require inspecting the right butt line 6 floor beam inboard support links and bushings for corrosion. 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 January 25, 2021.

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 *https://www.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.

For service information identified in this NPRM, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O Box 2206, Savannah, GA 31402–2206; phone: (800) 810–4853; fax: (912) 965–3520; email: *pubs@gulfstream.com;* internet: *https://www.gulfstream.com/en/customer-support/.* You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2020–0831; 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, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Ronald ''Ron'' Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474–5552; fax: (404) 474–5606; email: *ronald.wissing@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2020–0831; Project Identifier 2019–CE–031–AD'' 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 *https://www.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 Ronald ''Ron'' Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA was advised of a failed floor beam support link at right butt line (RBL) 6 on a Gulfstream Model GV airplane. The failed support link resulted from seizure of the retaining sleeve and bushing at the lower attachment point due to undetected corrosion. The floor beam support links at RBL 6, fuselage stations (FS) 499, 531, and 569.5 have a two-piece installation with straight bushings rather than spherical bearings in the inboard link lower end. Design of the support links allows floor beam movement when the cabin is pressurized. Seizure of the lower bushing will not allow the link assembly to move as designed, resulting in bending stress and potential failure of the link, which may compromise the integrity of the pressure vessel floor.

Gulfstream determined that the procedures for the existing Aircraft Maintenance Manual (AMM) inspection does not reliably detect corrosion in the floor beam support link lower bushings. Accordingly, Gulfstream has revised the airworthiness limitation requirements to the AMM by adding a detailed inspection with an initial and repetitive inspections at intervals of 96 months and including references for removal and installation instructions for RBL 6 Floor Beam Support Links.

This condition, if not addressed, could result in link failure, which can compromise the integrity of the pressure vessel floor and lead to loss of pressurization to the airplane.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Gulfstream GV Customer Bulletin Number 231, Revision A, dated July 30, 2019 (Gulfstream CB 231A). The service information contains procedures for the inspection of the RBL 6, FS 499, 531, and 569.5, and the bushing in the lower end of the link and all attachments for corrosion.

The FAA reviewed Gulfstream GV AMM, Section 05–10–10, Revision 51, dated February 28, 2020. The service information identifies tasks for a recurring detailed inspection of the floor beam and wing links FS 465 through FS 576.

This service information 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

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

This proposed AD would require a one-time inspection of the RBL 6 floor beam inboard support links and bushings for corrosion along with any repairs necessary. This proposed AD would require a recurring inspection of

the floor beam support links. This proposed AD also recommends sending the inspection results to Gulfstream.

Differences Between This Proposed AD and the Service Information

Gulfstream CB 231A requires reporting the results of the inspection to Gulfstream and this proposed AD would not.

Costs of Compliance

The FAA estimates that this proposed AD would affect 148 airplanes of U.S. registry.

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

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection per the Customer Bulletin, all 3 locations.	120 work-hours × $85 per hour = $10,200	Not applicable	$10,200	$1,509,600
Revise the AMM	1 work-hour × $85 per hour = $85	Not applicable	85	12,580

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. The FAA has no way of determining the number of airplanes that might need these replacements:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replacement of all 3 links	40 work-hours × $85 per hour = $3,400	$316	$3,716

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

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) 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 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:

Gulfstream Aerospace Corporation: Docket No. FAA–2020–0831; Project Identifier 2019–CE–031–AD.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by January 25, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GV airplanes, all serial numbers, certificated in any category.

(d) Subject

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

(e) Reason

This AD was prompted by a report that current inspection procedures of floor beam support links, which can fail due to corrosion, are inadequate. The FAA is issuing this AD to detect and correct corrosion on a floor beam support link lower bushing. This condition, if not addressed, could result in link failure, which can compromise the integrity of the pressure vessel floor and lead to loss of pressurization of the airplane.

(f) Actions and Compliance

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

(g) Action

(1) Within 24 months after the effective date of this AD, inspect the right butt line 6 floor beam inboard support links at fuselage stations (FS) 499, 531, and 569.5 for corrosion by following the Accomplishment Instructions, steps A through M, of Gulfstream GV Customer Bulletin No. 231,

Revision A, dated July 30, 2019 (Gulfstream CB 231A). Where Gulfstream CB 231A specifies contacting Gulfstream for procedures if any corrosion is found, you must replace the support link in accordance with a method approved by the Manager, Atlanta ACO Branch, FAA, before further flight. For a method to be approved by the Manager, Atlanta ACO Branch, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(2) Within 24 months after the effective date of this AD, revise the airworthiness limitations section of your maintenance manual or inspection program to incorporate the airworthiness limitations specified in Table 13: Fuselage Inspection Table, of Gulfstream GV Aircraft Maintenance Manual, Section 05–10–10, Revision 51, dated February 28, 2020. Thereafter, except as provided in paragraph (h) of this AD, no alternative inspection intervals may be approved for the fuselage floor beam and wing link FS 465–FS 576.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO 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 certification office, send it to the attention of the person identified in paragraph (i)(1) of this AD.

(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.

(3) Except as required by paragraph (g) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the following provisions apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled 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 RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(i) Related Information

(1) For more information about this AD, contact Ronald ''Ron'' Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474–5552; fax: (404) 474–5606; email: *ronald.wissing@faa.gov.*

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O Box 2206, Savannah, GA 31402–2206; phone: (800) 810–4853; fax: (912) 965–3520; email: *pubs@gulfstream.com;* internet: *https://www.gulfstream.com/en/customer-support/.* You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148.

Issued on December 2, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2020–27059 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2020–1103; Airspace Docket No. 20–ACE–21]

RIN 2120–AA66

Proposed Amendment of V–72, V–132, V–190, and V–289, and Revocation of V–238 in the Vicinity of Maples, MO

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to amend VHF Omnidirectional Range (VOR) Federal airways V–72, V–132, V–190, and V–289; and remove VOR Federal airway V–238 in the vicinity of Maples, MO. The VOR Federal airway modifications are necessary due to the planned decommissioning of the VOR portion of the Maples, MO, VOR/Tactical Air Navigation (VORTAC) navigation aid (NAVAID) which provides navigation guidance for portions of the affected airways listed above. The Maples VOR is being decommissioned as part of the FAA's VOR Minimum Operational Network (MON) program.

DATES: Comments must be received on or before January 25, 2021.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC 20590; telephone: (800) 647–5527, or (202) 366–9826. You must identify FAA Docket No. FAA–2020–1103; Airspace Docket No. 20–ACE–21 at the beginning of your comments. You may also submit comments through the internet at *https://www.regulations.gov.*

FAA Order 7400.11E, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11E at NARA, email: *fedreg.legal@nara.gov* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

FOR FURTHER INFORMATION CONTACT: Colby Abbott, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; 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 route structure as necessary to preserve the safe and efficient flow of air traffic within the National Airspace System (NAS).

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA–2020–1103; Airspace Docket No. 20–ACE–21) and be submitted in triplicate to the Docket Management Facility (see **ADDRESSES** section for address and phone number). You may also submit comments through the internet at *https://www.regulations.gov.*

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to FAA Docket No. FAA–2020–1103; Airspace Docket No. 20–ACE–21.'' The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified comment closing date will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. All comments submitted will be available for examination in the public docket both before and after the comment closing date. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRMs

An electronic copy of this document may be downloaded through the internet at *https://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's web page at *https://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 Office (see **ADDRESSES** section for address and phone number) between 9:00 a.m. and 5:00 p.m., Monday through Friday, except federal holidays. An informal docket may also be examined during normal business hours at the office of the Operations Support Group, Central Service Center, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX, 76177.

Availability and Summary of Documents for Incorporation by Reference

This document proposes to amend FAA Order 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020. FAA Order 7400.11E is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11E lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

Background

The FAA is planning to decommission the VOR portion of the Maples, MO, VORTAC in August 2021. The Maples, MO, VOR is a candidate VOR identified for discontinuance by the FAA's VOR MON program and listed in the final policy statement notice, ''Provision of Navigation Services for the Next Generation Air Transportation System (NextGen) Transition to Performance-Based Navigation (PBN) (Plan for Establishing a VOR Minimum Operational Network),'' published in the **Federal Register** of July 26, 2016 (81 FR 48694), Docket No. FAA–2011–1082.

Although the VOR portion of the Maples VORTAC is planned for decommissioning, the co-located DME portion of the NAVAID is being retained.

The existing Air Traffic Service (ATS) route dependencies to the Maples, MO, VORTAC NAVAID are VOR Federal airways V–72, V–132, V–190, V–238, and V–289. With the planned decommissioning of the VOR portion of the Maples VORTAC, the remaining ground-based NAVAID coverage in the area is insufficient to enable the continuity of V–72, V–190, and V–238. As such, proposed modifications to these affected airways would result in a gap in two of the airways (V–72 and V–190) and removing the third airway completely (V–238). However, the remaining ground-based NAVAID coverage in the area is sufficient to retaining two of the airways (V–132 and V- 289) as they are charted today by redefining the affected airway points in each of the airways.

To overcome the gaps created in V–72 and V–190, and the loss of V–238, instrument flight rules (IFR) traffic could use adjacent ATS routes, including VOR Federal airways V–14, V–88, V–132, V–175, V–178, and V–289, or request air traffic control (ATC) radar vectors to fly through or circumnavigate the affected area. Additionally, IFR pilots equipped with RNAV PBN capabilities could also navigate point to point using the existing fixes that will remain in place to support continued operations though the affected area. Visual flight rules (VFR) pilots who elect to navigate via the airways through the affected area could also take advantage of the adjacent VOR Federal airways or ATC services listed previously.

To retain V–132 as charted, the FAA is proposing to redefine the airway point defined by the intersection of the Forney, MO, VOR 086° and Maples, MO, VORTAC 052° radials ($LENO_X$ fix) by using the existing Forney, MO, VOR 086° radial and replacing the Maples, MO, radial with a new Vichy, MO, VOR/Distance Measuring Equipment (VOR/DME) 156°(T)/150°(M) radial. As a result, the V–132 airway would remain unchanged and as currently charted.

To retain V–289 as charted, the FAA is proposing to redefine the airway point defined by the intersection of the Maples, MO, VORTAC 236° and Vichy, MO, VOR/DME 204° radials (GOBEY fix) by replacing the Maples, MO, VORTAC radial with a new Dogwood, MO, VORTAC 058°(T)/057°(M) radial and using the existing Vichy, MO, VOR/DME 204° radial. As a result, the V–289 airway would remain unchanged and as currently charted.

The Proposal

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 by modifying VOR Federal airways V–72, V–132, V–190, and V–289, and removing V–238 in its entirety. The planned decommissioning of the VOR portion of the Maples, MO, VORTAC has made this action necessary.

The proposed VOR Federal airway changes are outlined below.

V–72: V–72 currently extends between the Razorback, AR, VORTAC and the Bible Grove, IL, VORTAC. The FAA proposes to remove the airway segment overlying the Maples, MO, VORTAC between the Dogwood, MO, VORTAC and the Farmington, MO, VORTAC. The unaffected portions of the existing airway would remain as charted.

V–132: V–132 currently extends between the Medicine Bow, WY, VOR/DME and the intersection of the Forney, MO, VOR 086° and Maples, MO, VORTAC 052° radials ($LENO_X$ fix). The airway excludes that portion within restricted areas R–4501A, R–4501B, R–4501C and R–4501D during their time of activation. The FAA proposes to redefine the $LENO_X$ fix as the intersection of the existing Forney, MO, VOR 086° radial and new Vichy, MO, VOR/DME 156°(T)/150°(M) radial. The existing airway would remain as charted and the exclusion language would remain unchanged.

V–190: V–190 currently extends between the Phoenix, AZ, VORTAC and the Pocket City, IN, VORTAC. The FAA proposes to remove the airway segment overlying the Maples, MO, VORTAC between the Springfield, MO, VORTAC and the Farmington, MO, VORTAC. Additional changes to other portions of the airway have been proposed in a separate NPRM. The unaffected portions of the existing airway would remain as charted.

V–238: V–238 currently extends between the Maples, MO, VORTAC and the Troy, IL, VORTAC. The FAA

proposes to remove the airway in its entirety.

V–289: V–289 currently extends between the Beaumont, TX, VORTAC and the Vichy, MO, VOR/DME. The FAA proposes to remove the airway point defined by the intersection of the Dogwood, MO, VORTAC 058° and Maples, MO, VORTAC 236° radials (MUPIE fix) and redefine the airway point defined by the intersection of the Maples, MO, VORTAC 236° and Vichy, MO, VOR/DME 204° radials (GOBEY fix) as the intersection of the new Dogwood, MO, VORTAC 058°(T)/057°(M) radial and existing Vichy, MO, VOR/DME 204° radial. The existing airway would remain as charted.

All radials in the VOR Federal airway descriptions below that do not reflect True (T)/Magnetic (M) degree radial information are unchanged and stated in True degrees.

VOR Federal airways are published in paragraph 6010(a) of FAA Order 7400.11E dated July 21, 2020, and effective September 15, 2020, which is incorporated by reference in 14 CFR 71.1. The ATS routes listed in this document would be subsequently published in the Order.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

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 Department of Transportation (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 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 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020, and effective September 15, 2020, is amended as follows:

Paragraph 6010(a) Domestic VOR Federal Airways.

* * * * *

V–72 [Amended]

From Razorback, AR; to Dogwood, MO. From Farmington, MO; Centralia, IL; to Bible Grove, IL.

* * * * *

V–132 [Amended]

From Medicine Bow, WY; INT Medicine Bow 106° and Cheyenne, WY, 330° radials; Cheyenne; Akron, CO; 17 miles, 49 miles, 59 MSL, Goodland, KS; 50 miles, 97 miles, 65 MSL, Hutchinson, KS; INT Hutchinson 078° and Chanute, KS, 293° radials; Chanute; INT Chanute 100° and Springfield, MO, 276° radials; Springfield; INT Springfield 058° and Forney, MO, 266° radials; Forney; INT Forney 086° and Vichy, MO, 156°(T)/150°(M) radials, excluding that portion within R–4501A, R–4501B, R–4501C, and R–4501D during their time of activation.

* * * * *

V–190 [Amended]

From Phoenix, AZ; St. Johns, AZ; Albuquerque, NM; Fort Union, NM; Dalhart, TX; Mitbee, OK; INT Mitbee 059° and Pioneer, OK, 280° radials; Pioneer; INT Pioneer 094° and Bartlesville, OK, 256° radials; Bartlesville; INT Bartlesville 075° and Oswego, KS, 233° radials; Oswego; INT Oswego 085° and Springfield, MO, 261° radials; to Springfield. From Farmington, MO; Marion, IL; to Pocket City, IN.

* * * * *

V–238 [Removed]

* * * * *

V–289 [Amended]

From Beaumont, TX; INT Beaumont 323° and Lufkin, TX, 161° radials; Lufkin; Gregg County, TX; Texarkana, AR; Fort Smith, AR; Harrison, AR; Dogwood, MO; INT Dogwood 058°(T)/057°(M) and Vichy, MO, 204° radials; to Vichy.

* * * * *

Issued in Washington, DC, on December 7, 2020.

George Gonzalez,

Acting Manager, Rules and Regulations Group.

[FR Doc. 2020–27111 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2020–1081; Airspace Docket No. 20–AEA–19]

RIN 2120–AA66

Proposed Establishment of Area Navigation (RNAV) Route Q–437; Northeastern United States

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to establish Area Navigation (RNAV) route Q–437 in the northeastern United States in support of the Northeast Corridor Atlantic Coast Route Project (NEC ACR) for improve efficiency of the National Airspace System (NAS) while reducing the dependency on ground based navigational systems.

DATES: Comments must be received on or before January 25, 2021.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC 20590; telephone: 1(800) 647–5527, or (202) 366–9826. You must identify FAA Docket No. FAA–2020–1081; Airspace Docket No. 20–AEA–19 at the beginning of your comments. You may also submit comments through the internet at *https://www.regulations.gov.*

FAA Order 7400.11E, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. The Order is also available for inspection at the National Archives and

Records Administration (NARA). For information on the availability of FAA Order 7400.11E at NARA, email: *fedreg.legal@nara.gov* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

FOR FURTHER INFORMATION CONTACT: Sean Hook, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; 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 expand the availability of RNAV routes in the NAS, increase airspace capacity, and reduce complexity in high air traffic volume areas.

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA–2020–1081 and Airspace Docket No. 20–AEA–19) and be submitted in triplicate to the Docket Management Facility (see **ADDRESSES** section for address and phone number). You may also submit comments through the internet at *https://www.regulations.gov.*

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to FAA Docket No. FAA–2020–1081 and Airspace Docket No. 20–AEA–19.'' The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified comment closing date will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRM's

An electronic copy of this document may be downloaded through the internet at *https://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's web page at *https://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 Office (see **ADDRESSES** section for address and phone number) between 9:00 a.m. and 5:00 p.m., Monday through Friday, except federal holidays. An informal docket may also be examined during normal business hours at the office of the Eastern Service Center, Federal Aviation Administration, Room 210, 1701 Columbia Ave., College Park, GA 30337.

Availability and Summary of Documents for Incorporation by Reference

This document proposes to amend FAA Order 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020 and effective September 15, 2020. FAA Order 7400.11E is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11E lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

Background

The Northeast Corridor Atlantic Coast Route (NEC ACR) project developed Performance Based Navigation (PBN) routes involving the Washington, Boston, New York, and Jacksonville Air Route Traffic Control Centers (ARTCC). The proposed routes would enable aircraft to travel from most locations along the east coast of the United States mainland between Maine and Charleston, SC. The proposed NEC ACR routes would also tie-in to the existing high altitude RNAV route structure enabling more efficient direct routings between the United States east coast and Caribbean area locations.

Additionally, the proposed Q-route would support the strategy to transition the NAS from a ground-based navigation aid, and radar-based system, to a satellite-based PBN system.

The Proposal

The FAA is proposing an amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 by establishing an Area Navigation (RNAV) route, Q–437, in the northeastern United States to support the Northeast Corridor Atlantic Coast Route Project.

Q–437: Q–437 is proposed to extend between VILLS, NJ, fix, and SLANG, VT, waypoint (WP).

United States area navigation routes are published in paragraph 2006 of FAA Order 7400.11E, dated July 21, 2020, and effective September 15, 2020, which is incorporated by reference in 14 CFR 71.1. The area navigation routes listed in this document would be subsequently published in the Order.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

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 Department of Transportation (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 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 7400.11E, Airspace Designations and Reporting Points, dated July 21, 2020 and effective September 15, 2020, is amended as follows:

Paragraph 2066 United States Area Navigation Routes.

* * * * *

Q–437 VILLS, NJ to SLANG, VT [New]

VILLS, NJ	FIX	(Lat. 39°18′03.87″ N, long. 075°06′37.89″ W)
DITCH, NJ	FIX	(Lat. 39°47′37.86″ N, long. 074°42′59.88″ W)
LUIGI, NJ	FIX	(Lat. 40°04′09.65″ N, long. 074°26′40.32″ W)
HNNAH, NJ	FIX	(Lat. 40°28′12.73″ N, long. 074°02′36.62″ W)
LLUND, NY	FIX	(Lat. 40°51′45.04″ N, long. 073°46′57.30″ W)
BIZEX, NY	WP	(Lat. 41°17′02.86″ N, long. 073°34′50.20″ W)
BINGS, NY	WP	(Lat. 42°00′33.26″ N, long. 073°30′01.81″ W)
WARUV, NY	FIX	(Lat. 42°45′52.14″ N, long. 073°34′41.41″ W)
SLANG, VT	WP	(Lat. 43°14′24.64″ N, long. 073°11′09.69″ W)

* * * * *

Issued in Washington, DC, on December 2, 2020.

George Gonzalez,

Acting Manager, Rules and Regulations Group.

[FR Doc. 2020–26947 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

21 CFR Part 1308

[Docket No. DEA–665]

Schedules of Controlled Substances: Removal of Samidorphan From Control

AGENCY: Drug Enforcement Administration, Department of Justice.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Drug Enforcement Administration (DEA) proposes to remove samidorphan (3-carboxamido-4-hydroxy naltrexone) and its salts from the schedules of the Controlled Substances Act (CSA). This scheduling action is pursuant to the CSA which requires that such actions be made on the record after opportunity for a hearing through formal rulemaking. Samidorphan is currently a schedule II controlled substance because it can be derived from opium alkaloids. This action would remove the regulatory controls and administrative, civil, and criminal sanctions applicable to controlled substances, including those specific to schedule II controlled substances, on persons who handle (manufacture, distribute, reverse distribute, dispense, conduct research, import, export, or conduct chemical analysis) or propose to handle samidorphan.

DATES: Interested persons may file written comments on this proposal in accordance with 21 CFR 1308.43(g). Electronic comments must be submitted, and written comments must be postmarked, on or before January 11, 2021. Commenters should be aware that the electronic Federal Docket Management System will not accept comments after 11:59 p.m. Eastern Time on the last day of the comment period.

Interested persons may file a request for hearing or waiver of participation pursuant to 21 CFR 1308.44 and in accordance with 21 CFR 1316.45, 1316.47, 1316.48, or 1316.49, as applicable. Requests for hearing, notices of appearance, and waivers of an opportunity for a hearing or to participate in a hearing must be received on or before January 11, 2021.

ADDRESSES: To ensure proper handling of comments, please reference ''Docket No. DEA–665'' on all correspondence, including any attachments.

- *Electronic comments:* DEA encourages that all comments be submitted through the Federal eRulemaking Portal, which provides the ability to type short comments directly into the comment field on the web page or to attach a file for lengthier comments. Please go to *http://www.regulations.gov* and follow the online instructions at that site for submitting comments. Upon completion of your submission you will receive a Comment Tracking Number for your comment. Please be aware that submitted comments are not instantaneously available for public view on *Regulations.gov*. If you have received a comment tracking number, your comment has been successfully submitted and there is no need to resubmit the same comment.
- *Paper comments:* Paper comments that duplicate an electronic submission are not necessary and are discouraged. Should you wish to mail a comment *in lieu of* an electronic format, it should be sent via regular or express mail to: Drug Enforcement Administration, Attention: DEA Federal Register Representative/DPW, 8701 Morrissette Drive, Springfield, Virginia 22152.
- *Hearing requests:* All requests for hearing and waivers of participation must be sent to: Drug Enforcement Administration, Attn: Hearing Clerk/OALJ, 8701 Morrissette Drive, Springfield, Virginia 22152.

FOR FURTHER INFORMATION CONTACT: Terrence L. Boos, Drug & Chemical Evaluation Section, Diversion Control Division, Drug Enforcement Administration; Mailing Address: 8701 Morrissette Drive, Springfield, Virginia 22152; Telephone: (571) 362–3261.

SUPPLEMENTARY INFORMATION:

Posting of Public Comments

Please note that all comments received in response to this docket are considered part of the public record. They will, unless reasonable cause is given, be made available by DEA for public inspection online at *http://www.regulations.gov*. Such information includes personal identifying information (such as your name, address, etc.) voluntarily submitted by the commenter. The Freedom of Information Act applies to all comments received. If you want to submit personal identifying information (such as your name, address, etc.) as part of your comment, but do not want it to be made publicly available, you must include the phrase ''PERSONAL IDENTIFYING INFORMATION'' in the first paragraph

of your comment. You must also place the personal identifying information you do not want made publicly available in the first paragraph of your comment and identify what information you want redacted.

If you want to submit confidential business information as part of your comment, but do not want it to be made publicly available, you must include the phrase ''CONFIDENTIAL BUSINESS INFORMATION'' in the first paragraph of your comment. You must also prominently identify confidential business information to be redacted within the comment.

Comments containing personal identifying information and confidential business information identified as directed above will generally be made publicly available in redacted form. If a comment has so much confidential business information or personal identifying information that it cannot be effectively redacted, all or part of that comment may not be made publicly available. Comments posted to *http://www.regulations.gov* may include any personal identifying information (such as name, address, and phone number) included in the text of your electronic submission that is not identified as directed above as confidential.

An electronic copy of this document and supplemental information to this proposed rule are available at *http://www.regulations.gov* for easy reference. DEA specifically solicits written comments regarding DEA's economic analysis of the impact of these proposed changes. DEA requests that commenters provide detailed descriptions in their comments of any expected economic impacts, especially to small entities. Commenters should provide empirical data to illustrate the nature and scope of such impact.

Request for Hearing, Notice of Appearance at or Waiver of Participation in Hearing

Pursuant to 21 U.S.C. 811(a), this action is a formal rulemaking ''on the record after opportunity for a hearing.'' Such proceedings are conducted pursuant to the provisions of the Administrative Procedure Act (5 U.S.C. 551–559). 21 CFR 1308.41–1308.45, and 21 CFR part 1316 subpart D. In accordance with 21 CFR 1308.44 (a)–(c), requests for hearing, notices of appearance, and waivers of an opportunity for a hearing or to participate in a hearing may be submitted by interested persons. Such requests or notices must conform to the requirements of 21 CFR 1308.44(a) or (b), and 1316.47 or 1316.48, as applicable, and include a statement of the interest of the person in the proceeding and the objections or issues, if any, concerning which the person desires to be heard. Any waiver must conform to the requirements of 21 CFR 1308.44(c) and 1316.49, including a written statement regarding the interested person's position on the matters of fact and law involved in any hearing.

Please note that, pursuant to 21 U.S.C. 811(a)(2), the purpose of a hearing would be to determine whether samidorphan should be removed from the list of controlled substances based on a finding that the drug does not meet the requirements for inclusion in any schedule. All requests for hearing and waivers of participation must be sent to DEA using the address information above, on or before the date specified above.

Legal Authority

The CSA provides that proceedings for the issuance, amendment, or repeal of the scheduling of any drug or other substance may be initiated by the Attorney General (1) on his own motion, (2) at the request of the Secretary of the Department of Health and Human Services (HHS),[1] or (3) on the petition of any interested party. 21 U.S.C. 811(a). This action was initiated by a petition to remove samidorphan from the list of scheduled controlled substances of the CSA, and is supported by, *inter alia,* a recommendation from the Assistant Secretary of HHS and an evaluation of all relevant data by DEA. If finalized, this action would remove the regulatory controls and administrative, civil, and criminal sanctions applicable to controlled substances, including those specific to schedule II controlled substances, on persons who handle or propose to handle samidorphan.

Background

Samidorphan (3-carboxamido-4-hydroxy naltrexone), is a chemical entity that is structurally similar to naltrexone, a mu (μ)-opioid receptor antagonist. Samidorphan (other developmental code names: RDC–0313 or ALKS 33) is a mu-opioid receptor antagonist with a weak partial agonist activity at the kappa (κ)- and delta (δ)-opioid receptors. According to HHS, products containing samidorphan are currently being developed for medical use.

Samidorphan is currently controlled in Schedule II of the CSA, as defined in 21 CFR 1308.12(b)(l), because it can be derived from opium alkaloids. On April 14, 2014, DEA received a petition to initiate proceedings to amend 21 CFR 1308.12(b)(1) so as to decontrol samidorphan from schedule II of the CSA. The petition complied with the requirements of 21 CFR 1308.43(b) and was accepted for filing. The petitioner contended that samidorphan has been characterized as an opioid receptor antagonist, a class of drugs with no abuse potential.

Proposed Determination To Decontrol Samidorphan

Pursuant to 21 U.S.C. 811(b), on April 24, 2015, DEA, having gathered the necessary data on samidorphan, forwarded that data and the petition to HHS[2] with a request for scientific and medical evaluation and scheduling recommendation for samidorphan. On January 9, 2020, DEA received from HHS a scientific and medical evaluation (dated December 19, 2019) conducted by the Food and Drug Administration (FDA) entitled ''Basis for the Recommendation to Remove Samidorphan (3-Carboxamido-4-Hydroxy Naltrexone) and its Salts from All Schedules of Control Under the Controlled Substances Act'' and a scheduling recommendation. The National Institute on Drug Abuse (NIDA) concurred with the scientific and medical evaluation conducted by FDA. Based on the totality of the available scientific data, samidorphan does not conform with the findings for schedule II in 21 U.S.C. 812(b)(2) or in any other schedule as set forth in 21 U.S.C. 812(b). Based on FDA's scientific and medical review of the eight factors and findings related to the substance's abuse potential, legitimate medical use, and dependence liability, HHS recommended that samidorphan and its salts be removed from all schedules of control of the CSA.

The CSA requires DEA, as delegated by the Attorney General,[3] to determine whether HHS's scientific and medical evaluation, scheduling recommendation, and all other relevant data constitute substantial evidence that a substance should be scheduled. 21

[1] As discussed in a memorandum of understanding entered into by the Food and Drug Administration (FDA) and NIDA, FDA acts as the lead agency within the HHS in carrying out the Secretary's scheduling responsibilities under the CSA, with the concurrence of NIDA. 50 FR 9518, March 8, 1985. The Secretary of the HHS has delegated to the Assistant Secretary for Health of the HHS the authority to make domestic drug scheduling recommendations. 58 FR 35460, July 1, 1993.

[2] Administrative responsibilities for evaluating a substance for control under the CSA are performed for HHS by the Food and Drug Administration (FDA), with the concurrence of NIDA, according to a Memorandum of Understanding (50 FR 9518; March 8, 1985).

[3] 28 CFR 0.100(b).

U.S.C. 811(b). DEA reviewed the scientific and medical evaluation and scheduling recommendation provided by HHS, and all other relevant data, and completed its own eight-factor review document on samidorphan pursuant to 21 U.S.C. 811(c). Included below is a brief summary of each factor as analyzed by HHS and DEA, and as considered by DEA in this proposal to remove samidorphan from the schedules of the CSA. Please note that both DEA and HHS analyses are available in their entirety under ''Supporting and Related Material'' of the public docket for this rule at *http://www.regulations.gov* under docket number DEA–665.

1. The Drug's Actual or Relative Potential for Abuse.

The first factor that must be considered is the actual or relative potential for abuse of samidorphan. The term ''abuse'' is not defined in the CSA. However, the legislative history of the CSA suggests the following points in determining whether a particular drug or substance has a potential for abuse: [4]

a. Whether there is evidence that individuals are taking the drug or drugs containing such a substance in amounts sufficient to create a hazard to their health or to the safety of other individuals or to the community.

As stated by HHS, samidorphan is not readily available or marketed in any country, so there is a lack of evidence to date regarding samidorphan diversion, illicit manufacturing, or use outside of clinical trials. There are no anecdotal reports of samidorphan abuse in the published literature or in drug abuse discussion platforms (*e.g.,* PubMed, erowid.org).

b. Whether there is significant diversion of the drug or drugs containing such a substance from legitimate drug channels.

According to HHS, there were no reports of diversion of samidorphan in clinical trials conducted with this substance. DEA further notes that there are no reports of law enforcement encounters of samidorphan in the National Forensic Laboratory Information System (NFLIS),[5] the System to Retrieve Information from Drug Evidence (STRIDE) [6] and STARLiMS [7] (Queried October 14, 2020). Thus, there is no evidence of diversion of samidorphan.

c. *Whether individuals are taking the drug or drugs containing such a substance on their own initiative rather than on the basis of medical advice from a practitioner licensed by law to administer such drugs in the course of his professional practice.*

According to HHS, there is no evidence of individuals taking samidorphan on their own initiative. DEA notes that a review of scientific literature, STRIDE, STARLiMS, and NFLIS databases revealed no history of abuse of samidorphan. Thus, there is no evidence that individuals are taking samidorphan on their own initiative rather than on the basis of medical advice from a practitioner licensed by law to administer the same. There are no anecdotal reports of samidorphan abuse in the published literature or in drug discussion platforms (*e.g.,* PubMed, *erowid.org*, *bluelight.org*).

d. Whether the drug or drugs containing such a substance are new drugs so related in their action to a substance already listed as having a potential for abuse to make it likely that it will have the same potentiality for abuse as such drugs, thus making it reasonable to assume that there may be significant diversions from legitimate channels, significant use contrary to or without medical advice, or that they have a substantial capability of creating hazards to the health of the user or to the safety of the community.

According to HHS, actions of samidorphan are not related to a substance already listed as having a potential for abuse. There is no evidence that individuals are taking samidorphan to create a hazard to their health or to the safety of other individuals or to the community. Samidorphan is not currently marketed and there is no evidence of diversion of samidorphan from legitimate drug channels. There is no evidence that individuals are taking samidorphan on their own initiative without medical advice. Samidorphan is not related in its action to any known substance with abuse liability. Substances such as naloxone and naltrexone, with pharmacological effects of mu-opioid receptor antagonists similar to that of samidorphan, have been decontrolled under the CSA. Thus, these data collectively indicate that samidorphan has no potential for abuse.

2. Scientific Evidence of the Drug's Pharmacological Effects, If Known.

Preclinical studies

In Vitro Studies

According to HHS, opioid receptor binding and functional studies with samidorphan have been conducted *in vitro* in cloned human opioid receptors expressed in Chinese hamster ovary (CHO) cells. These studies showed that samidorphan binds to human mu- and kappa-opioid receptors with sub-nanomolar Ki values of 0.052 nM and 0.23 nM, respectively. Samidorphan also binds to the delta-opioid receptors with nanomolar affinity (Ki of 2.7 nM). These values demonstrate that, like the opioid receptor antagonist naltrexone, samidorphan has a high affinity for the mu- and kappa-opioid receptors. A cellular functional study with [^{35}S]GTPγS assay in CHO cells further showed that samidorphan has subnanomolar antagonist activity at the mu-opioid receptor and is comparable to that of naltrexone.

Safety Pharmacology Studies

According to the HHS' review, several safety studies were conducted to determine the cardiovascular, respiratory, and neurological effects of the drug and can help determine if samidorphan has depressant, stimulant, or other psychoactive effects related to abuse potential.

Cardiovascular and Respiratory Effects

According to HHS, a study evaluating *in vitro* effects of samidorphan (0.5, 5, and 50 μM) on the QT-interval, QRS duration, contractility and maximum rate of contraction was conducted in isolated retrograde perfused rabbit heart preparation. Results showed that, at the lowest concentration, 0.5 μM, samidorphan significantly decreased contractility. But, samidorphan at 5 and 50 μM concentrations did not significantly affect contractility.

An animal study revealed the cardiovascular and pulmonary effects of orally administered (per os or PO) samidorphan (0.5, 3, and 10 mg/kg doses) in beagle dogs. The high doses of samidorphan resulted in several cases of emesis and excessive salivation. For pharmacokinetic (PK) measurements, animals were given either a low dose of 0.5 mg/kg or a high dose of 20 mg/kg of samidorphan. Male dogs given a single PO dose of samidorphan had average PK measurements of C_{max} = 4320 ng/mL, T_{max} = 1.2 hr, half-life = 4.1 hr, and AUC_{last} = 30,500 hr•ng/mL. In regard to cardiac activity, the female and male groups produced a slight decrease in

[4] Comprehensive Drug Abuse Prevention and Control Act of 1970, H.R. Rep. No. 91–1444, 91st Cong., Sess. 1 (1970); 1970 U.S.C.C.A.N. 4566, 4603.

[5] The NFLIS is a national forensic laboratory reporting system that systematically collects results from drug chemistry analyses conducted by State and local forensic laboratories in the United States.

[6] STRIDE is a database of drug exhibits sent to DEA laboratories for analysis. Exhibits from the database are from DEA, other federal agencies, and some local law enforcement agencies.

[7] STARLiMS is a laboratory information management system that systematically collects results from drug chemistry analyses conducted by DEA laboratories. On October 1, 2014, STARLiMS replaced STRIDE as the DEA laboratory drug evidence data system of record.

systolic blood pressure (an average insignificant decrease of 17 to 26 mm Hg) and no significant differences in cardiac contractility or body temperature. Based on the results, this investigation reported no observed adverse effects at the level of 10 mg/kg in beagle dogs. In the same study, samidorphan at any of the doses tested did not cause any significant effects on respiratory rate, tidal volume, and minute volume.

According to HHS' review, samidorphan reversed cardiac and respiratory effects produced by continuous intravenous infusion (IV) of fentanyl, a mu-opioid receptor agonist, in beagle dogs and Cynomolgus monkeys. Overall, samidorphan does not appear to produce mu-opioid receptor agonist related cardiac or pulmonary effects.

Central Nervous System Effects

According to HHS, central nervous system effects of samidorphan (3.5, 35, or 350 mg/kg, PO) on functional observational battery in a study conducted in Sprague-Dawley rats are most consistent with that of depressants such as opioids, cannabinoids, and $GABA_A$ channel modulators.

Unlike mu-opioid receptor agonists that typically produce analgesic effects in assays on thermal and inflammatory painful stimulation, samidorphan produced no measurable analgesic effects. In the hot plate test in male Sprague-Dawley rats, samidorphan did not produce thermal analgesia when administered subcutaneously (SC) at doses of 0.003 to 0.1 mg/kg or when administered intraperitoneally at doses in the range of 0.01 to 30 mg/kg. However, samidorphan blocked morphine-induced (15 mg/kg, SC) analgesia in rats with ED_{50} values of 0.01 mg/kg (SC administration) and 0.3 mg/kg (PO administration), respectively. Its blockade of morphine's analgesic effects lasted for approximately 4 hours. Because morphine is known to produce its analgesic effects as an agonist of the mu-opioid receptor, this study suggests that samidorphan blocks this mechanism of action similar to other mu-opioid receptor antagonists, such as naloxone and naltrexone, which also possess this blockade effect.

In a tail-flick assay used to measure thermal-nociception, the result showed that administered subcutaneously samidorphan did not produce analgesia up to the highest dose tested of 10 mg/kg. Furthermore, samidorphan antagonized morphineinduced anti-nociception when administered either SC or PO. These data indicate that samidorphan acts as an antagonist at the mu-opioid receptor because it blocked the analgesic effects of the mu-opioid receptor agonist morphine without producing analgesic effects of its own.

Abuse Liability Studies

Effects on Ethanol Self-Administration

According to HHS, a self-administration study in male Wistar rats was conducted to determine if samidorphan has effects similar to that of other opioid receptor antagonists such as naltrexone in reducing ethanol drinking behavior. Rats were trained to self-administer ethanol on a fixed ratio (FR) 2 schedule of reinforcement. Effects of samidorphan (0 to 3 mg/kg, SC) administered 30 minutes prior to the placement of the rats into the test cages on ethanol drinking behavior were studied. Naltrexone, the positive control drug (3 or 6 mg/kg, SC), was only able to decrease lever responding by approximately 75 percent. The highest dose of samidorphan (3 mg/kg, SC) decreased lever responding by approximately 50 percent. According to HHS, these data demonstrate that pretreatment with samidorphan can decrease, but not eliminate, the reinforcing effects of 10 percent ethanol and these results are consistent with that of other mu-opioid receptor antagonists such as naltrexone, which is indicated for the treatment of alcohol dependence.

Drug Discrimination Studies

Drug discrimination assays in animals can be used to predict if a test drug will have abuse potential in humans. According to HHS, a drug discrimination study was conducted to test the stimulus effects of samidorphan in rats trained to discriminate the stimulus effects of subcutaneously administered morphine (3 mg/kg) to its vehicle (0.9 percent sodium chloride for injection, USP) in a two-lever operant chamber on a FR10 schedule of reinforcement. Samidorphan (0.1, 0.3, 1 or 3 mg/kg) did not generalize to the morphine cue. Samidorphan did not affect lever press response rates indicating that the rats were not incapacitated by the drug. These data indicate that samidorphan does not produce a discriminative cue similar to that of morphine (at 3 mg/kg).

Self-Administration Studies

HHS cited two self-administration studies assessing the reinforcing effects of samidorphan in rats. In the first study, rats were trained to lever press on a FR5 schedule for intravenous self-administration of morphine (0.56 mg/kg/injection). When samidorphan was tested at 0.0136, 0.0408, and 0.068 mg/kg/injection, the animals did not respond at levels seen with the positive control, morphine. Therefore, it was concluded that samidorphan did not produce reinforcing effects similar to that of morphine in rats. However, the total number of infusions of samidorphan was statistically higher than the vehicle. According to HHS, this could have been the result of the inadequate extinction due to the reintroduction of the training drug between doses of samidorphan; this could have artificially inflated the responding of samidorphan because animals never fully underwent extinction. As a result, a second self-administration study with heroin as the training drug using FR5 and a progressive schedule of reinforcement was conducted. There was no reintroduction of the training drug between doses of samidorphan with an additional referred arm of naltrexone. The result showed that the number of samidorphan (0.068 mg/kg/injection) injections, similar to naltrexone, was significantly higher than the number of saline injections, but was significantly lower than that of heroin. A progressive ratio schedule of reinforcement is used to determine the reinforcing efficacy of a drug by measuring the break point. A breakpoint is defined as the number of operant responses (lever presses) at which the subject ceases self-administration of the reinforcer. Results of the study using the PR schedule of reinforcement were similar to that of the FR5 study: All doses of samidorphan tested produced breakpoints that were significantly lower than heroin and only the highest dose of samidorphan (0.068 mg/kg/injection) was significantly higher than saline. Importantly, naltrexone, tested at the same doses as samidorphan, produced results similar to that of samidorphan. According to HHS, these studies suggest that samidorphan has a profile similar to that of naltrexone and does not produce statistically significant reinforcing effects.

Intra-Cranial Self-Stimulation Study

Intracranial self-stimulation (ICSS) is a behavioral study that can be used to evaluate brain rewarding or aversive effects of drugs. HHS provided an ICSS study report of samidorphan in rats. Following implantation with permanent indwelling electrodes in the right medial forebrain at the level of the lateral hypothalamus, the animals were trained to respond (*i.e.,* lever press) to

receive brain stimulation.[8] Baseline ICSS training generated a frequency response curve where increasing the intensity of brain stimulation increased the rate of lever pressing. After baseline ICSS levels were established, rats were administered several doses of samidorphan. The subcutaneous administration of samidorphan at doses of 0.03, 0.1, 0.3, and 1.0 mg/kg did not shift the frequency response curve relative to baseline and did not change the maximum rate of responding. This study indicates that samidorphan does not affect the brain reward pathway in rats.

Clinical Abuse Liability Studies

The HHS review describes two studies to assess the abuse potential of samidorphan in human subjects. The first one, a randomized, double-blind, placebo and positive control, crossover study was to compare samidorphan (2.5, 10, and 20 mg, PO), oxycodone (15 and 30 mg, PO), and the placebo in 41 non-dependent recreational opioid users. The primary pharmacodynamic (PD) assessment was At the Moment Drug Liking measured by a visual analog scale (VAS), with secondary endpoints that measured Overall Drug Liking, Take Drug Again, and Alertness, all on a bipolar VAS. High, Good Effects and Bad Effects were measured on a unipolar VAS. Oxycodone at 30 and 15 mg doses produced mean Drug Liking scores of 81 and 73.3, respectively and these scores were significantly higher than the placebo. All three doses of samidorphan produced At the Moment Drug Liking, Overall Drug Liking, and Take Drug Again scores that were not significantly different from the placebo (50 to 51). There was one report (2.1 percent) of euphoria as an adverse event (AE) after taking samidorphan (20 mg) versus 11 reports (22.4 percent) following the positive control oxycodone dose (30 mg). This study concluded that samidorphan does not produce PD measurements that are consistent with abuse potential.

A second abuse potential study was conducted by using a placebo (PO), samidorphan (10 and 30 mg, PO), oxycodone (40 mg, PO), pentazocine (30 mg, IV), and naltrexone (100 mg, IV) in 42 healthy non-dependent recreational opioid users. The primary PD assessment was At the Moment Drug Liking measured by the bipolar VAS, with secondary endpoints that measured Overall Drug Liking, Take Drug Again, and Alertness. The study also took PK measurements to determine a correlation between blood levels and time of onset of the PD assessment. The positive controls, oxycodone (40 mg) and pentazocine (30 mg), produced the E_{max} of Drug Liking VAS scores of 76.1 and 82, respectively and these were significantly higher than the placebo. The E_{max} drug liking scores following 10 and 30 mg samidorphan were not significantly different from the placebo or naltrexone (100 mg). Euphoric mood was indicated as an AE in 30 subjects (53.6 percent) for oxycodone and in 30 subjects (52.6 percent) for pentazocine. The 30 and 10 mg doses of samidorphan produced a euphoric mood as an AE in 9 (15 percent) and 7 (12.3 percent) subjects, respectively; however, 5 subjects (8.6 percent) reported euphoria when receiving naltrexone, and 5 subjects (8.8 percent) reported euphoria when receiving the placebo. There were no reports of abuse of the drug or diversion in the study. HHS concludes that samidorphan produces stimulus effects similar to the placebo and naltrexone and does not have abuse potential. DEA notes that a recent peer-reviewed published clinical report describes that samidorphan, similar to a placebo and naltrexone, lacks abuse potential.

In summary, data from *in vitro* studies showed that samidorphan is a mu-opioid receptor antagonist with weak partial agonist activity at the kappa- and delta-opioid receptors. Data from *in vivo* studies further supported this conclusion; samidorphan blocked the analgesic effects of the mu-opioid receptor agonist morphine and the respiratory depressive effects of fentanyl. Samidorphan neither produced a discriminative cue similar to that of morphine nor had reinforcing effects in *in vivo* abuse liability studies in animals. Data from two clinical abuse potential studies suggested that samidorphan does not produce drug liking scores similar to oxycodone (a mu-opioid receptor agonist) or pentazocine (a kappa-opioid receptor agonist); instead, drug liking scores produced by samidorphan were similar to the negative controls, placebo and naltrexone. Overall, these data support the conclusion that samidorphan does not have abuse liability.

3. The State of Current Scientific Knowledge Regarding the Drug or Other Substance.

Samidorphan's molecular formula is $C_{21}H_{26}N_2O_4$ with a molecular weight of 370.44 g/mol. Currently, there are two salt forms, a hydrochloric acid salt (RDC–0313–01; molecular weight is 406.90 g/mol) and a malic acid salt (RDC–0313–02; molecular weight is 504.53 g/mol). Samidorphan is a derivative of naltrexone and it shares structural similarity with naltrexone. A multi-step process of samidorphan synthesis starts with naltrexone, with an end product of its malate salt.

According to HHS, samidorphan is rapidly absorbed both orally and sublingually. The T_{max} is approximately 60 minutes after orally dosing, with a half-life of six to eight hours depending on the dose. The plasma levels of samidorphan increase linearly with each dose and it rapidly distributes throughout the body. Samidorphan is metabolized into two main products, RDC–9986 (*N*-dealkylated metabolite) and RDC–1066 (N-oxide metabolite), and they can be detected in human plasma at greater than 10 percent of the total drug-related exposure. Both RDC–9986 and RDC–1066 have nanomolar affinity for the mu-, kappa-, and delta-opioid receptors. RDC–9986 is an agonist at all three opioid receptors whereas RDC–1066 showed antagonist activity at the mu-opioid receptor as assessed by the [^{35}S]GTPγS functional assay. DEA further notes that samidorphan has been reported to have high bioavailability following both sublingual and oral administration, it is not subject to extensive first-pass metabolism, and the PK parameters are not affected by food or age in health volunteers.

In summary, samidorphan shares chemical structural features with mu-opioid antagonists such as naltrexone. It is synthesized from the non-controlled substance naltrexone. Samidorphan exhibits high oral bioavailability and is rapidly absorbed. Clinical studies suggest that samidorphan was generally well-tolerated following single and multiple doses. RDC–9986 and RDC–1066, the two main metabolites of samidorphan, though they bind to opioid receptors, do not contribute significantly to pharmacodynamics of samidorphan.

4. Its History and Current Pattern of Abuse.

According to HHS, samidorphan has not been marketed in any country and thus information about the history and current pattern of its abuse is not available. Preclinical and clinical studies evaluating abuse potential of samidorphan did not show any abuse-related signals (see Factor 1 and 2, DEA and HHS Eight Factor Analyses). Instead, samidorphan showed effects similar to those of mu-opioid antagonists, a class of drugs not known to have abuse potential. The opioid antagonists, naloxone and naltrexone, were both originally schedule II

[8] This statement and the subsequent content in this paragraph are based on the revised information provided under MOU by FDA/Controlled Substance Staff (CSS).

substances as ''opiate derivatives,'' and both are synthesized from thebaine. However, because they lacked opioid agonist activity, these were decontrolled in 1974 (naloxone), and in 1975 (naltrexone). More recently, the opioid antagonist naloxegol, a FDA-approved drug for the treatment of opioid induced constipation, was decontrolled in 2015. In addition, as mentioned earlier (see Factor 1, DEA and HHS Eight Factor Analyses), NFLIS, STRIDE, and STARLiMS had no mentions of samidorphan.

5. The Scope, Duration, and Significance of Abuse.

As stated by HHS, information about the scope, duration, and significance of samidorphan abuse is not available because it has not been marketed in any country. As mentioned in Factor 4 (DEA and HHS Eight Factor Analyses), a comprehensive review and research on available databases performed by both HHS and DEA revealed no reports of abuse of samidorphan. Data from preclinical and clinical studies showed no evidence of abuse potential for samidorphan. As stated by HHS, samidorphan upon its approval and availability for marketing is unlikely to be abused.

6. What, if any, Risk There is to the Public Health.

Based on the data and scientific information of preclinical and clinical study data reviewed by both HHS and DEA, there are no signals that indicate that samidorphan has abuse potential (see Factor 1 and 2, DEA and HHS Eight Factor Analyses). Currently, there is no evidence of drug dependence, abuse, and diversion. Thus, there is likely to be little or no risk of abuse and public health risk from samidorphan if it becomes available on the market.

7. Its Psychic or Physiological Dependence Liability.

According to HHS, several long-term toxicology studies were conducted using samidorphan in rats and dogs lasting 13, 26, or 39 weeks at doses of 250, 50, and 10 mg/kg/day. The animals were continually monitored after the study for withdrawal signs, such as weight changes, food consumption, morbidity, mortality, and locomotion effects. These studies did not find any behaviors or physical manifestations that were different from the control groups, indicating that samidorphan lacks potential to produce physical dependence. Data from these clinical studies showed no signals related to withdrawal or physical dependence.

The lack of samidorphan's ability to function as a positive reinforcer in self-administration studies in animals suggests that the use of samidorphan will not lead to psychological dependence. Similar to naltrexone (see Factor 2, DEA and HHS Eight Factor Analyses), samidorphan would not be expected to produce psychological dependence, and no evidence of psychological dependence was observed in clinical studies.

8. Whether the Substance is an Immediate Precursor of a Substance Already Controlled Under the CSA.

Samidorphan is not considered an immediate precursor of any controlled substance listed under the CSA as defined by 21 U.S.C. 802(23).

Conclusion

Based on consideration of the scientific and medical evaluation and accompanying recommendation of HHS, and based on DEA's consideration of its own eight-factor analysis, DEA finds that these facts and all relevant data demonstrate that samidorphan does not possess abuse or dependence potential. According to HHS, medical product formulations containing samidorphan are under development. However, the finding that samidorphan lacks abuse potential would, irrespective of other findings, permit decontrol of samidorphan prior to or in the absence of an FDA action under 21 U.S.C. 355(c). Therapeutic and supratherapeutic doses of samidorphan did not produce physical or psychological dependence both in non-clinical (in rats and dogs) and in clinical studies. Accordingly, DEA finds that samidorphan does not meet the requirements for inclusion in any schedule, and should be removed from control under the CSA.

Regulatory Analyses

Executive Orders 12866, 13563, and 13771, Regulatory Planning and Review, Improving Regulation and Regulatory Review, and Reducing Regulation and Controlling Regulatory Costs

In accordance with 21 U.S.C. 811(a), this scheduling action is subject to formal rulemaking procedures done ''on the record after opportunity for a hearing,'' which are conducted pursuant to the provisions of 5 U.S.C. 556 and 557. The CSA sets forth the criteria for removing a drug or other substance from the list of controlled substances. Such actions are exempt from review by Office of Management and Budget (OMB) pursuant to section 3(d)(1) of Executive Order (E.O.) 12866 and the principles reaffirmed in E.O. 13563.

This final rule is not an E.O. 13771 regulatory action pursuant to E.O. 12866 and OMB guidance.[9]

Executive Order 12988, Civil Justice Reform

This regulation meets the applicable standards set forth in sections 3(a) and 3(b)(2) of E.O. 12988 Civil Justice Reform to eliminate drafting errors and ambiguity, minimize litigation, provide a clear legal standard for affected conduct, and promote simplification and burden reduction.

Executive Order 13132, Federalism

This rulemaking does not have federalism implications warranting the application of E.O. 13132. The rule does not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or the distribution of power and responsibilities among the various levels of government.

Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

This rule does not have tribal implications warranting the application of E.O. 13175. This rule does not 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.

Regulatory Flexibility Act

The Acting Administrator, in accordance with the Regulatory Flexibility Act (RFA) (5 U.S.C. 601–612), has reviewed this proposed rule and by approving it certifies that it will not have a significant economic impact on a substantial number of small entities. The purpose of this rule is to remove samidorphan from the list of schedules of the CSA. This action will remove regulatory controls and administrative, civil, and criminal sanctions applicable to controlled substances for handlers and proposed handlers of samidorphan. Accordingly, it has the potential for some economic impact in the form of cost savings.

If finalized, the proposed rule will affect all persons who would handle, or propose to handle samidorphan. Samidorphan is not currently available or marketed in any country. Due to the wide variety of unidentifiable and unquantifiable variables that potentially

[9] Office of Mgmt. & Budget, Exec. Office of The President, Interim Guidance Implementing Section 2 of the Executive Order of January 30, 2017 Titled ''Reducing Regulation and Controlling Regulatory Costs'' (Feb. 2, 2017).

could influence the distribution and dispensing rates, if any, of samidorphan, DEA is unable to determine the number of entities and small entities which might handle samidorphan. In some instances where a controlled pharmaceutical drug is removed from the schedules of the CSA, DEA is able to quantify the estimated number of affected entities and small entities because the handling of the drug is expected to be limited to DEA registrants even after removal from the schedules. In such instances, DEA's knowledge of its registrant population forms the basis for estimating the number of affected entities and small entities. However, DEA does not have a basis to estimate whether samidorphan is expected to be handled by persons who hold DEA registrations, by persons who are not currently registered with DEA to handle controlled substances, or both. Therefore, DEA is unable to estimate the number of entities and small entities who plan to handle samidorphan.

Although DEA does not have a reliable basis to estimate the number of affected entities and quantify the economic impact of this final rule, a qualitative analysis indicates that this rule is likely to result in some cost savings. As noted above, DEA is specifically soliciting comments on the economic impact of this proposed rule. DEA will revise this section if warranted after consideration of any comments received. Any person planning to handle samidorphan will realize cost savings in the form of saved DEA registration fees, and the elimination of physical security, recordkeeping, and reporting requirements.

Because of these factors, DEA projects that this rule will not result in a significant economic impact on a substantial number of small entities.

Unfunded Mandates Reform Act of 1995

On the basis of information contained in the ''RFA'' section above, DEA has determined and certifies pursuant to the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1501 *et seq.,* that this action would not result in any 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 for inflation) in any one year * * *.'' Therefore, neither a Small Government Agency Plan nor any other action is required under provisions of UMRA.

Paperwork Reduction Act

This action does not impose a new collection of information requirement under the Paperwork Reduction Act, 44 U.S.C. 3501–3521. This action would not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations.

List of Subjects in 21 CFR Part 1308

Administrative practice and procedure, Drug traffic control, Reporting and recordkeeping requirements.

For the reasons set out above, 21 CFR part 1308 is proposed to be amended to read as follows:

PART 1308—SCHEDULES OF CONTROLLED SUBSTANCES

■ 1. The authority citation for 21 CFR part 1308 continues to read as follows:

Authority: 21 U.S.C. 811, 812, 871(b), 956(b), unless otherwise noted.

■ 2. In § 1308.12, revise the introductory text of paragraph (b)(1) to read as follows:

§ 1308.12 Schedule II.

* * * * *

(b) * * *

(1) Opium and opiate, and any salt, compound, derivative, or preparation of opium or opiate excluding apomorphine, thebaine-derived butorphanol, dextrorphan, nalbuphine, naldemedine, nalmefene, naloxegol, naloxone, 6β-naltrexol, naltrexone, and samidorphan, and their respective salts, but including the following:

* * * * *

Timothy J. Shea,

Acting Administrator.

[FR Doc. 2020–26812 Filed 12–9–20; 8:45 am]

BILLING CODE 4410–09–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–2020–0109]

RIN 2127–AM04

Federal Motor Vehicle Safety Standards: Test Procedures

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Advance notice of proposed rulemaking (ANPRM).

SUMMARY: NHTSA is issuing this ANPRM to seek public comment on whether any test procedures for any Federal Motor Vehicle Safety Standards (FMVSS) may be a candidate for replacement, repeal, or modification, for reasons other than for considerations relevant only to automated driving systems (ADS). This document is a continuation of the Agency's efforts to improve the FMVSS and minimize burdens. The Agency takes this action in response to its review of the FMVSS and to public comments solicited by DOT in a 2017 notice on its regulatory reform efforts. The commenters requested that NHTSA amend test procedures for air brakes and occupant crash protection. NHTSA has also identified some possible additional test procedure issues and discusses them in this Notice. In addition, this ANPRM also seeks comments and supporting information relating to any other test procedures which may be a candidate for replacement, repeal or modification, not just those specifically discussed in this Notice.

DATES: Comments must be received no later than February 8, 2021. See the Public Participation heading of the **SUPPLEMENTARY INFORMATION** section of this document for more information about written comments.

ADDRESSES: You may submit comments to the docket number identified in the heading of this document by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC 20590–0001
- *Hand Delivery or Courier:* 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.
- *Fax:* 202–493–2251.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the **SUPPLEMENTARY INFORMATION** section of this document. Note that all comments received will be posted without change to *http://www.regulations.gov,* including any personal information provided. Please see the ''Privacy Act'' heading below.

Privacy Act: Anyone is able to search the electronic form of all comments received into any docket by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review

DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

Confidential Information: If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel of NHTSA, at the address given under **FOR FURTHER INFORMATION CONTACT**. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above under **ADDRESSES**. When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in the confidential business information regulation. (49 CFR part 512.)

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* or the street address listed above. Follow the online instructions for accessing the dockets.

FOR FURTHER INFORMATION CONTACT: Ms. Mary Versailles, Office of Rulemaking, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590. Telephone: (202) 366–2057.

SUPPLEMENTARY INFORMATION:

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I. Background

On October 2, 2017, the Department of Transportation (DOT) published a Notice in the **Federal Register** inviting ''the public to provide input on existing rules and other agency actions that are good candidates for repeal, replacement, suspension, or modification.'' [1] DOT received almost 3,000 comments in response to this Notice, of which approximately twenty-three addressed rules and agency actions under the scope of the National Highway Traffic Safety Administration (NHTSA). In response to these public comments, and on the Agency's own initiative, the agency is planning to issue a series of advance notices of proposed rulemaking (ANPRMs) on various regulatory reform topics.

This ANPRM specifically discusses test procedures [2] that may be candidates for replacement, repeal, or modification. This Notice does not address the performance requirements within the standards, but only the test procedures specified in the standards for NHTSA to use to verify compliance. Additionally, this Notice does not address issues related to test procedures relevant only to technologies for automated driving systems (ADS), commonly referred to as automated or self-driving vehicles. Comments on test procedures that may be candidates for repeal, replacement, or modification to permit the introduction and certification of ADS would be more appropriate for the ANPRM for RIN 2127–AM00 [3] or one of the topic-specific ANPRMs. NHTSA also notes that the specific test procedures discussed in the remainder of this Notice are not meant to be an exclusive listing of the test procedures that may be suitable candidates for replacement, repeal, or modification. Rather, these tests procedures are intended to serve as examples for why a test procedure might be a candidate.

II. Example Test Procedures

As discussed in this section, NHTSA, partially in response to comments, has identified possible examples of test procedures that might be candidates for replacement, repeal, or modification. These are discussed below to illustrate the kinds of test procedures for which the Agency would like to seek comment for this Notice. DOT received a few comments from trade associations that addressed test procedure changes. The Truck and Engine Manufacturers Association (''EMA''; DOT–OST–2017–0069–2786) commented on the test procedures of FMVSS No. 121, but, as discussed below, NHTSA would like more information on the request to understand better EMA's suggestion. The Alliance of Automobile Manufacturers (''Alliance''; DOT–OST–2017–0069–2700), raised issues relating to FMVSS Nos. 208 and 209. The Association of Global Automakers (''Global''; DOT–OST–2017–0069–2772) raised the same issue as the Alliance relating to FMVSS No. 208, but did not address FMVSS No. 209. Both the Alliance and Global suggested changes to FMVSS Nos. 208 and 209 that appear to go beyond test procedure changes. Because these comments require consideration of both performance requirements and test procedures, the comments are discussed in the ANPRM for RIN 2127–AM05, which deals with regulatory barriers in the performance requirements for non-ADS vehicles.

A. FMVSS No. 103

Compliance with the performance requirements of FMVSS No. 103, Windshield defrosting and defogging systems (49 CFR 571.103), is determined by the Agency using a test procedure incorporated from SAE Recommended Practice J902 (August 1964 or March 1967), which is predicated on a vehicle's having a conventional internal combustion engine (ICE). The Agency is considering whether these procedures should be revised or modified for vehicles with other types of propulsion and requests comment on this issue.

B. FMVSS 104

Determination of compliance with the performance requirements of FMVSS 104, Windshield wiping and washing systems (49 CFR 571.104), has the same test procedure issue as FMVSS 103 since it is also predicated on the vehicle's having an ICE. In addition, should the test procedure be updated for newer systems with rain sensor technology?

C. FMVSS 105/135

FMVSS 105, Hydraulic and electric brake systems (49 CFR 571.105), is applicable to multi-purpose passenger vehicles (MPVs), trucks, and buses with a gross vehicle weight rating (GVWR) of 3,500 kilograms (kg; 7,716 pounds (lbs)) or more equipped with hydraulically or electrically actuated brakes. The standard has not been updated since 1976. NHTSA has a similar brake standard, FMVSS No. 135, Light vehicle brake systems (49 CFR 571.135), which went into effect in 1995 and applies to hydraulically braked vehicles, but with a GVWR less than 3,500 kg. Should the Agency revise the test procedures in either of these brake standards to improve clarity or efficiency for compliance?

For example, the FMVSS Nos. 105/135 braking tests could be revised consistent with FMVSS No. 122, Motorcycle brake systems (49 CFR 571.122), as it relates to the number of stopping attempts for each specified test condition. FMVSS Nos. 105/135 specifies, in most test conditions, the completion of no fewer than six stops regardless of which of the stops, or how many of them, meet the stopping distance performance requirement. FMVSS No. 122, on the other hand,

[1] 82 FR 45750.

[2] As used in this notice, ''test procedures'' includes test conditions, test procedures, and test devices (*e.g.,* dummies and crash barriers).

[3] 84 FR 24433, May 29, 2019.

permits the skipping of the remaining stops (if any) for that test and allowing the next test to be performed once a passing stop is obtained, even if that occurs before the specified number of stops are made. Should FMVSS Nos. 105/135 be updated and would this change reduce testing time and cost without compromising the safety evaluation of the braking system?

D. FMVSS No. 121

EMA commented that, despite a number of revisions in the past, FMVSS No. 121, Air brake systems (49 CFR 571.121), has not kept pace with advances in heavy-duty air brake components and systems. While indicating that a number of modifications would be appropriate to address this issue, EMA did not elaborate on them. The Agency requests more information about the modifications that would update the standard to keep pace with advances in heavy-duty air brake components and systems, and why, specifically, they are needed.

E. FMVSS No. 126

Section 6.3.4 of FMVSS No. 126, Electronic stability control systems (49 CFR 571.126), specifies the use of outriggers [4] when testing MPVs, trucks, and buses, but not when testing passenger cars. Today's vehicle market includes crossover vehicles which are classified as MPVs but which are typically based on passenger car platforms, unlike traditional MPVs, which are based on light truck platforms. What evidence is there that crossover vehicles perform more like passenger cars than traditional MPVs, and how would updating the test procedure to remove the outriggers be justified? If the Agency was to specify the use of outriggers based on criteria other than just vehicle classification, what would commenters recommend for criteria? Would modifying the criteria improve efficiency and reduce the need for these devices in some testing, thereby reducing costs?

IV. Questions Requesting Further Information From the Public

In order to inform the Agency as it works toward possible rulemaking proposals, NHTSA invites comments on any other test procedures that are potential candidates for replacement, repeal, or modification. NHTSA again emphasizes that the test procedures discussed in Sections II and III of this notice are just examples of test procedures that might be a candidate for replacement, repeal, or modification, and thus illustrate the types of reasons why such a change may be necessary. NHTSA requests comments on the specific test procedure issues discussed above, other issues related to the test procedures for the FMVSSs discussed above, and issues related to the test procedures for any other FMVSS. For example, a test procedure may specify testing that is no longer necessary, or may not be clear about how to test vehicles with newer technology, or may even have the effect of prohibiting the introduction of such vehicles. The Agency requests that commenters provide as much research, evidence, or data as possible to support their comments, as that information will be of great assistance to the Agency as it considers whether to develop a proposal to revise the procedure.

In addition, commenters should consider the following general questions when considering potential test procedure improvements:

1. Do any test procedures specify the use of equipment that is obsolete or no longer available at a reasonable cost? If so, what options are available as replacements?

2. Do any test procedures specify the use of equipment in a manner that is more specific than necessary to ensure that the test procedure be repeatable and reproducible?

3. Are there test procedures in regulations from standards organizations or other countries that evaluate compliance with the same requirement as one in an FMVSS? If so, what evidence is there that the test procedure provides an evaluation of compliance with the requirement in a manner and to an extent equivalent to the current test procedure in the FMVSS?

4. What specific problems and challenges have testing laboratories, researchers, or other entities encountered when trying to follow existing test procedures in an FMVSS? For each problem or challenge, please explain how it is currently addressed and any suggested solutions for how it should be addressed in the future.

5. Are there any test procedures that do not accurately reflect real-world scenarios? If so, what evidence is there to show that a test procedure needs to be updated to reflect real-world scenarios being tested more accurately? Similarly, how can test procedures be updated to represent a real-world scenario more accurately?

6. Are there any loopholes in test procedures that could lead to a passing test result without meeting the intent of a standard or regulation? If so, how can such loopholes be closed by updating the test procedure?

V. Public Participation

a. How can I influence NHTSA's thinking on this subject?

Your comments will help NHTSA improve its consideration of issues raised by this ANPRM. NHTSA invites you to provide different views on options NHTSA discusses, new approaches the agency has not considered, new data, descriptions of how this ANPRM may affect you, or other relevant information.

NHTSA welcomes public review on all aspects of this ANPRM. NHTSA will consider the comments and information received in developing a potential proposal for updating test procedures for motor vehicles and motor vehicle equipment. Your comments will be most effective if you follow the suggestions below:

- Explain your views and reasoning as clearly as possible.
- Provide solid evidence and data to support your views.
- If you estimate potential costs, explain how you arrived at that estimate.
- Provide specific examples to illustrate your concerns.
- Offer specific alternatives.
- Refer your comments to the specific sections of (or questions listed in) the ANPRM.

b. How do I prepare and submit comments?

Your primary comments should be written in English. To ensure that your comments are filed in the correct docket, please include the docket number of this document in your comments.

Your primary comments should not be more than 15 pages long (49 CFR 553.21), however, you may attach additional documents, such as supporting data or research, to your primary comments. There is no limit on the length of the attachments.

Please submit one copy (two copies if submitting by mail or hand delivery) of your comments, including the attachments, to the docket following the instructions given in the **ADDRESSES** section at the beginning of this document. Please note, if you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using the Optical Character Recognition (OCR) process, thus allowing NHTSA to search and copy certain portions of your submission.

[4] An outrigger is a stabilizing device attached to the vehicle to protect the vehicle and/or driver from rollover during test maneuvers.

Please note that pursuant to the Data Quality Act, in order for substantive data to be relied upon and used by the agency, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines. Accordingly, we encourage you to consult the guidelines in preparing your comments. DOT's guidelines may be accessed at *www.transportation.gov/regulations/dot-information-dissemination-quality-guidelines.*

c. How can I be sure that my comments were received?

If you submit comments by hard copy and wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail. If you submit comments electronically, your comments should appear automatically in the docket on *www.regulations.gov.* If they do not appear within two weeks of posting, NHTSA suggests that you call the Docket Management Facility at 202–366–9826.

d. How do I submit confidential business information?

If you wish to submit any information under a claim of confidentiality, you must submit three copies of your complete submission, including the information that you claim to be confidential business information, to the Office of the Chief Counsel, NHTSA, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590.

In addition, you should submit a copy (two copies if submitting by mail or hand delivery) from which you have deleted the claimed confidential business information to the docket by one of the methods given above under **ADDRESSES**. When you submit a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in NHTSA's confidential business information regulation (49 CFR part 512).

e. Will the Agency consider late comments?

NHTSA will consider all comments that the docket receives before the close of business on the comment closing date indicated in the **DATES** section. To the extent possible, NHTSA will also consider comments that the docket receives after that date.

f. How can I read the comments submitted by other people?

You may read the comments received by the docket at the address given in the **ADDRESSES** section. The hours of the docket are indicated above in the same location. You may also read the comments on the internet, identified by the docket number at the heading of this notice, at *www.regulations.gov.* Please note that, even after the comment closing date, NHTSA will continue to file relevant information in the docket as it becomes available. Further, some people may submit late comments. Accordingly, NHTSA recommends that you periodically check the docket for new material.

VI. Rulemaking Notices and Analyses

a. Executive Orders 12866, 13563, and DOT Regulatory Policies and Procedures

Executive Order 12866, ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993), provides for making determinations whether a regulatory action is ''significant'' and therefore subject to OMB review and to the requirements of the Executive Order. The Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Executive Order 13563, ''Improving Regulation and Regulatory Review'' (76 FR 3821, January 21, 2011), supplements and reaffirms the principles established by Executive Order 12866 by encouraging harmonization of regulations across agencies and requiring agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice. Additionally, Executive Orders 12866 and 13563 require agencies to provide a meaningful opportunity for public participation. Accordingly, we have asked commenters to answer a variety of questions to elicit practical information about alternative approaches and relevant technical data on whether and how best to update test procedures throughout 49 CFR part 571. These comments will help the Department evaluate whether a proposed rulemaking is needed and appropriate.

NHTSA has considered the impact of this ANPRM under Executive Order 12866, Executive Order 13563, and the DOT's regulatory policies and procedures. As discussed in this notice, the Agency lacks the necessary information to develop a proposal at this time due to a number of unanswered questions and unresolved considerations. However, NHTSA anticipates that any proposal that was to result from this Notice could have minor economic impact by clarifying how newer technology is tested, or could result in cost-savings by eliminating unnecessary aspects of test procedures. Therefore, this rulemaking has been determined to be not ''significant'' under the Department of Transportation's regulatory policies and procedures and the policies of the Office of Management and Budget.

b. Executive Order 13771 (Reducing Regulation and Controlling Regulatory Costs)

This action is not subject to the requirements of E.O. 13771 (82 FR 9339, February 3, 2017) because it is an advance notice of proposed rulemaking.

c. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.,* no analysis is required for an ANPRM. However, small entities, including small vehicle manufacturers and equipment manufacturers, are encouraged to comment if they identify any aspects of a potential rulemaking that may apply to them.

d. Executive Order 13132 (Federalism)

NHTSA does not believe that there would be sufficient federalism implications to warrant the preparation of a federalism assessment. The purpose of this rulemaking is not to adopt new safety performance requirements which would preempt non-identical State requirements, but merely to revise test procedures for existing safety performance requirements that would not affect their stringency.

e. Executive Order 12988 (Civil Justice Reform)

With respect to the review of the promulgation of a new regulation, section 3(b) of Executive Order 12988, ''Civil Justice Reform'' (61 FR 4729, February 7, 1996) requires that

Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with that requirement.

f. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA), a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. There are no information collection requirements associated with this ANPRM. Any information collection requirements and the associated burdens will be discussed in detail once a proposal has been issued.

g. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (*e.g.,* the statutory provisions regarding NHTSA's vehicle safety authority) or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers. The NTTAA directs us to provide Congress (through OMB) with explanations when we decide not to use available and applicable voluntary consensus standards. As NHTSA has not yet developed specific regulatory provisions, the NTTAA does not apply for purposes of this ANPRM.

h. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure of State, local, or Tribal governments, in the aggregate, or by the private sector, of more than $100 million annually (adjusted for inflation with base year of 1995). NHTSA has determined that this ANPRM would not result in expenditures by State, local, or Tribal governments, in the aggregate, or by the private sector, in excess of $100 million annually.

i. National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has preliminarily determined that implementation of this rulemaking action would not have any significant impact on the quality of the human environment.

j. Plain Language

The Plain Language Writing Act of 2010 (Pub. L. 111–274) requires that Federal agencies write documents in a clear, concise, and well-organized manner. While the Act does not cover regulations, Executive Orders 12866 and 13563 require each agency to write all notices in plain language that is simple and easy to understand. Application of the principles of plain language includes consideration of the following questions:

- Have we organized the material to suit the public's needs?
- Are the requirements in the notice clearly stated?
- Does the notice contain technical language or jargon that is not clear?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
- Would more (but shorter) sections be better?
- Could we improve clarity by adding tables, lists, or diagrams?

If you have any responses to these questions, please include them in your comments on this ANPRM.

k. Regulatory Identifier Number (RIN)

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

Issued in Washington, DC.

Under authority delegated in 49 CFR part 1.95 and 501.5.

James C. Owens,

Deputy Administrator.

[FR Doc. 2020–27001 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–59–P

Notices

Federal Register

Vol. 85, No. 238

Thursday, December 10, 2020

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

December 7, 2020.

The Department of Agriculture has submitted the following information collection requirement(s) to Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested 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; 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 January 11, 2021 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.

Rural Utilities Service

Title: OneRD Guaranteed Loan Program.

OMB Control Number: 0572–0155.

Summary of Collection: Rural Development is implementing a new consolidated guaranteed loan program. This interim final rule would create a new guaranteed loan program that would combine four existing guaranteed loan programs under one regulatory platform. These four existing programs, described below, are: (1) The Community Facilities Program (0575–0137), (2) the Water and Waste Disposal Program (0572–0122), (3) the Business and Industry Program (0570–0014), and (4) the Rural Energy for America Program (formerly known as the Renewable Energy Systems and Energy Efficiency Improvements Program—0570–0050) under Title IX, Section 9007 of the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill).

Community Facilities Program. The Rural Housing Service (RHS) is authorized by Section 306 of the Consolidated Farm and Rural Development Act (7 U.S.C. 1926) to make loans to public agencies, nonprofit corporations, and Indian tribes for the development of essential community facilities primarily serving rural residents. RHS has been making guaranteed loans through its Community Programs, which was authorized by Congress in 1990. Community Program guaranteed loans are used to finance many types of projects varying in size and complexity from large general hospitals to small firefighting equipment loans. The guaranteed loan program encourages lender participation and provides specific guidance in the processing and servicing of guaranteed Community Facility loans.

Water and Waste Disposal Program. The Rural Utilities Service is authorized by Section 306 of the Consolidated Farm and Rural Development Act (7 U.S.C. 1926) to make loans to public agencies, nonprofit corporations, and Indian tribes for the development of water and waste disposal facilities primarily serving rural residents. Water and Waste Disposal Programs (WW), which has been in existence for approximately 60 years, was authorized with the Appropriations Act of 1990, when Congress appropriated funds, to implement the Water and Waste Disposal guaranteed loan program. Water and waste disposal guaranteed loans are used to finance many types of projects varying in size and complexity. The guaranteed loan program encourages lender participation and provides specific guidance in the processing and servicing of guaranteed WW loans.

Business and Industry Program. The Business and Industry (B&I) Guaranteed Loan Program was legislated in 1972 under Section 310B of the Consolidated Farm and Rural Development Act, as amended. The purpose of the program is to improve, develop, or finance businesses, industries, and employment and improve the economic and environmental climate in rural communities. This purpose is achieved through bolstering the existing private credit structure through the guaranteeing of quality loans made by lending institutions, thereby providing lasting community benefits.

Rural Energy for America Program. The Rural Energy for America Program is authorized under the 2008 Farm Bill to make loan guarantees and grants to farmers, ranchers, and rural small businesses to purchase renewable energy systems and make energy efficiency improvements. The program is designed to help farmers, ranchers, and rural small business reduce energy cost and consumption, develop new income streams, and help meet the nation's critical energy needs.

In an effort to reduce paperwork and make Rural Development forms more consistent with each other, thereby improving customer service, RD has revised the forms in this burden package to accommodate all four programs.

Need and Use of the Information: Lending entities who wish to participate in this program must submit an application and/or certain information to Rural Development. This information will be used to determine their eligibility for participation in this program.

Eligible lenders and their prospective borrowers who are seeking guaranteed loans will have to submit applications with specified information, certifications, and agreements to the State Office. This information will be used to determine borrower eligibility,

to determine project eligibility and feasibility, and to ensure that borrowers operate on a sound basis and use funds for authorized purposes.

Description of Respondents: Business or other for-profit; Not-for-profit institutions.

Number of Respondents: 740.

Frequency of Responses: Reporting: Annually.

Total Burden Hours: 50,242.

Levi S. Harrell,

Departmental Information Collection Clearance Officer.

[FR Doc. 2020–27115 Filed 12–9–20; 8:45 am]

BILLING CODE 3410–15–P

DEPARTMENT OF AGRICULTURE

Forest Service

Boundary Descriptions for the Columbia River Gorge National Scenic Area, Hood River, Multnomah and Wasco Counties, Oregon; Clark, Klickitat and Skamania Counties, Washington State

AGENCY: Forest Service, USDA.

ACTION: Notice of availability.

SUMMARY: In accordance with the Columbia River Gorge National Scenic Area Act of Nov. 17, 1986, the Forest Service has prepared boundary descriptions for the Columbia River Gorge National Scenic Area exterior boundary, Special Management Area boundaries, and Urban Area boundaries.

FOR FURTHER INFORMATION CONTACT: Information may be obtained by contacting the Headquarters Office of the Columba River Gorge National Scenic Area, 902 Wasco Avenue, Suite 200, Hood River, OR 97031–3117; may call (541) 308–1700 or directly, Miki Fujikawa, Lands Staff Officer, at *miki.fujikawa@usda.gov.* Additional information concerning this notice may be obtained from the Columbia River Gorge Commission at *http://www.gorgecommission.org.* Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8:00 a.m. and 8:00 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: The Forest Service and Columbia River Gorge Commission partnered to produce legal descriptions for three Congressionally Designated areas of the Columbia River Gorge National Scenic Area: The National Scenic Area exterior boundary, Special Management Area boundaries, and Urban Area boundaries. The boundary descriptions clarify previously existing boundary maps. Documents may be viewed at the following offices: USDA Forest Service, Yates Building, 14th and Independence Avenue SW, Washington, DC 20024; at the USDA Forest Service Region 6 Regional Office,1220 SW 3rd Ave., Portland, OR 97204; and at the Headquarters Office of the Columba River Gorge National Scenic Area, 902 Wasco Avenue, Suite 200, Hood River, OR 97031. Additionally, should the above offices be closed due to Covid–19 precautions, the documents can be viewed at the following website: *http://www.gorgecommission.org/images/uploads/amendments/Commission_Rule_350-10_(Final,_amended_as_of_Dec._31,_2018).pdf.*

Jennifer Eberlien,

Associate Deputy Chief, National Forest System.

[FR Doc. 2020–27114 Filed 12–9–20; 8:45 am]

BILLING CODE 3411–15–P

DEPARTMENT OF AGRICULTURE

Forest Service

Forest Service Handbook 2709.11, Chapter 80; Special Uses; Operating Plans and Agreements for Powerline Facilities

AGENCY: Forest Service, USDA.

ACTION: Issuance of Proposed Directives; notice of availability for public comment.

SUMMARY: The United States Department of Agriculture (USDA), Forest Service, is seeking public comment on a proposed directive implementing section 512 of the Federal Land Policy and Management Act (FLPMA), as added by the Consolidated Appropriations Act of 2018. Section 512 of FLPMA governs development, review, and approval of proposed operating plans and agreements for vegetation management, inspection, and operation and maintenance of powerline facilities on National Forest System (NFS) lands.

DATES: Comments must be received in writing by January 11, 2021.

ADDRESSES: The proposed directives are available at, and comments may be submitted electronically to, *https://cara.ecosystem-management.org/Public/CommentInput?project=ORMS-2718.* Comments may be mailed to Gregory C. Smith, Director, Lands and Realty Management, 1400 Independence Avenue SW, Washington, DC 20250–1124. All timely comments, including names and addresses, will be placed in the record and will be available for public inspection and copying. The public may inspect comments received at *https://cara.ecosystem-management.org/Public/ReadingRoom?project=ORMS-2718.*

FOR FURTHER INFORMATION CONTACT: Reggie Woodruff, Lands and Realty Management, at 202–205–1196 *reginal.woodruff@usda.gov.* Individuals who use telecommunication devices for the deaf may call the Federal Relay Service at 800–877–8339 between 8:00 a.m. and 8:00 p.m., Eastern Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Section 211 of division O of the Consolidated Appropriations Act of 2018 amended Title V of FLPMA, 43 U.S.C. 1761–1771, to add section 512, codified at 43 U.S.C. 1772. Section 512 of FLPMA governs development, review, and approval of proposed operating plans and agreements for vegetation management, inspection, and operation and maintenance of powerline facilities on NFS lands. Section 512 of FLPMA requires the Forest Service to promulgate implementing regulations and issue implementing agency guidance. The Forest Service promulgated regulations implementing section 512 of FLPMA on July 10, 2020 (85 FR 41387). The proposed directive would add Chapter 80 to the Special Uses Handbook, to implement section 512 of FLPMA.

The Forest Service has determined that the proposed directive would formulate standards, criteria, and guidelines applicable to a Forest Service program and is therefore publishing the proposed directive for public comment in accordance with 36 CFR part 216.

After the public comment period closes, the Forest Service will consider timely and relevant comments in developing the final directive. A notice of the final directive, including a response to timely and relevant comments, will be posted on the Forest Service's web page at *https://www.fs.fed.us/about-agency/regulations-policies/comment-on-directives.*

Christine Dawe,

Acting Associate Deputy Chief, National Forest System.

[FR Doc. 2020–27104 Filed 12–9–20; 8:45 am]

BILLING CODE 3411–15–P

DEPARTMENT OF AGRICULTURE

Forest Service

Forest Service Manual 2740; Forest Service Handbook 2709.11, Chapter 50; Special Uses Management, Vegetation Management Pilot Projects; Special Uses Handbook—Standard Forms and Supplemental Clauses

AGENCY: Forest Service, USDA.

ACTION: Issuance of Proposed Directives; notice of availability for public comment.

SUMMARY: The United States Department of Agriculture (USDA), Forest Service, is seeking public comment on proposed directives implementing section 8630 of the Agriculture Improvement Act of 2018 (2018 Farm Bill). Section 8630 of the 2018 Farm Bill gives the Forest Service discretion to issue permits for conducting vegetation management pilot projects under lower liability standards to holders of an authorization for a powerline facility or natural gas pipeline on National Forest System (NFS) lands. These pilot projects may be conducted only on NFS lands that are not covered by the special use authorization for the powerline facility or natural gas pipeline.

DATES: Comments must be received in writing by January 11, 2021.

ADDRESSES: The proposed directives are available at, and comments may be submitted electronically to, *https://cara.ecosystem-management.org/Public/CommentInput?project=ORMS-2717.* Comments may be mailed to Gregory C. Smith, Director, Lands and Realty Management, 1400 Independence Avenue SW, Washington, DC 20250–1124. All timely comments, including names and addresses, will be placed in the record and will be available for public inspection and copying. The public may inspect comments received at *https://cara.ecosystem-management.org/Public/ReadingRoom?project=ORMS-2717.*

FOR FURTHER INFORMATION CONTACT: Reggie Woodruff, Lands and Realty Management, at 202–205–1196 or *reginal.woodruff@usda.gov.* Individuals who use telecommunication devices for the deaf may call the Federal Relay Service at 800–877–8339 between 8:00 a.m. and 8:00 p.m., Eastern Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Section 8630 of the 2018 Farm Bill gives the Forest Service discretion to issue permits for conducting vegetation management pilot projects under lower liability standards to holders of an authorization for a powerline facility or natural gas pipeline. These pilot projects may be conducted only on NFS lands that are not covered by the special use authorization for the powerline facility or natural gas pipeline. Pilot projects must be conducted outside the linear right-of-way for the associated powerline facility or natural gas pipeline; may not extend more than 150 feet from either side of the powerline facility or natural gas pipeline; and may not have a total width of more than 200 feet including both sides of the powerline facility or natural gas pipeline. In addition, pilot projects may not overlap with vegetation management conducted under the special use authorization for the powerline facility or natural gas pipeline, including removal and pruning of hazard trees outside the linear right-of-way for a powerline facility. The liability provisions in a special use permit for a pilot project have no effect on the liability provisions in the special use authorization for the powerline facility or natural gas pipeline, including the liability provisions that apply to removal and pruning of hazard trees inside and outside the linear right-of-way.

The proposed directive at Forest Service Manual 2700, Special Uses Management, Chapter 40, Vegetation Management Pilot Projects, and proposed new clause B–39 in Forest Service Handbook 2709.11, Chapter 50, section 52.2, would provide for authorizing vegetation management pilot projects consistent with section 8630 of the 2018 Farm Bill and Title V of the Federal Land Policy and Management Act, section 28 of the Mineral Leasing Act, and their implementing regulations. The Forest Service has determined that two provisions in the proposed directives would formulate standards, criteria, and guidelines applicable to a Forest Service program, specifically, providing for use of form FS–2700–4 for pilot project permits and the criteria for determining the maximum dollar amount of fire suppression costs a holder must reimburse the Forest Service for a wildfire caused by the holder's operations under a pilot project permit. Therefore, the Forest Service is publishing those proposed provisions for public comment in accordance with 36 CFR part 216. The remainder of the proposed directives is not subject to public notice and comment because it merely implements statutory provisions that the Forest Service lacks discretion to interpret and therefore does not formulate standards, criteria, and guidelines applicable to FS programs.

After the public comment period closes, the Forest Service will consider timely and relevant comments in developing the final directives. A notice of the final directives, including a response to timely and relevant comments, will be posted on the Forest Service's web page at *https://www.fs.fed.us/about-agency/regulations-policies/comment-on-directives.*

Christine Dawe,

Acting Associate Deputy Chief, National Forest System.

[FR Doc. 2020–27103 Filed 12–9–20; 8:45 am]

BILLING CODE 3411–15–P

DEPARTMENT OF AGRICULTURE

National Agricultural Statistics Service

Notice of Reinstatement of the Agricultural Labor Survey Previously Scheduled for October 2020

AGENCY: National Agricultural Statistics Service, USDA.

ACTION: Reinstatement of the Agricultural Labor Survey Previously Scheduled for October 2020.

SUMMARY: The National Agricultural Statistics Service (NASS) announces the reinstatement of the Agricultural Labor Survey previously scheduled for October 2020 and the associated publication previously scheduled for November 2020. NASS is reinstating the previously suspended information collection pursuant to a recent federal court order. *See United Farm Workers* v. *Perdue,* No. 20–cv–01452–DAD–JLT (E.D. Cal. Oct. 28, 2020) (order granting TRO and preliminary injunction).

FOR FURTHER INFORMATION CONTACT: Kevin L. Barnes, Associate Administrator, National Agricultural Statistics Service, U.S. Department of Agriculture, (202)720–2707.

SUPPLEMENTARY INFORMATION: *Title:* Agricultural Labor Survey.

OMB Control Number: 0535–0109.

Expiration Date of Approval: February 28, 2022.

This notice announces NASS's intention to end the suspension of the Agricultural Labor Survey previously scheduled for October 2020, and the associated publication previously scheduled for November 2020. The suspension notice (OMB No. 0535–0109) was published in the **Federal Register** on September 30, 2020. That suspension notice was challenged in federal court; the court recently issued a preliminary injunction ordering NASS to reinstate the data collection previously scheduled for October 2020.

See United Farm Workers v. *Perdue,* No. 20–cv–01452–DAD–JLT (E.D. Cal. Oct. 28, 2020). Pursuant to the court's order, NASS issues this notice of reinstatement. The reinstated survey will be based on July and October reference weeks and completion of the survey and report is expected to require nine weeks following the **Federal Register** publication of this notice. If the court's order is modified or dissolved in the future, NASS will publish a subsequent notice informing the public of that development as well as NASS's intentions regarding this information collection.

Authority: These data are collected under authority of 7 U.S.C. 2204(a). Individually identifiable data collected under this authority are governed by Section 1770 of the Food Security Act of 1985, 7 U.S.C. 2276, which requires USDA to afford strict confidentiality to non-aggregated data provided by respondents.

Signed at Washington, DC, December 4, 2020.

Kevin L. Barnes,

Associate Administrator.

[FR Doc. 2020–27109 Filed 12–9–20; 8:45 am]

BILLING CODE 3410–20–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–53–2020]

Foreign-Trade Zone (FTZ) 82—Mobile, Alabama Authorization of Production Activity; Aker Solutions, Inc. (Subsea Oil and Gas Systems), Mobile, Alabama

On August 7, 2020, Aker Solutions, Inc., submitted a notification of proposed production activity to the FTZ Board for its facility within FTZ 82, in Mobile, Alabama.

The notification was processed in accordance with the regulations of the FTZ Board (15 CFR part 400), including notice in the **Federal Register** inviting public comment (85 FR 50802, August 18, 2020). On December 7, 2020, the applicant was notified of the FTZ Board's decision that no further review of the activity is warranted at this time. The production activity described in the notification was authorized, subject to the FTZ Act and the FTZ Board's regulations, including Section 400.14.

Dated: December 7, 2020.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2020–27139 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

[Docket No. 201120–0309]

RIN 0694–XC067

Notice of Request for Public Comments by the Titanium Sponge Working Group

AGENCY: Bureau of Industry and Security, Commerce.

ACTION: Notice of request for public comments.

SUMMARY: In March of 2019, the Secretary initiated an investigation under Section 232 of the Trade Expansion Act of 1962, as amended, to determine the effects on the national security from imports of titanium sponge. In February of 2020, the President issued a memorandum concurring with the Secretary's findings that titanium sponge imports threatened to impair U.S. national security. The President's concurrence also agreed that actions to adjust imports under Section 232, such as tariffs, should not be taken at this time and established an interagency working group. The work of the Titanium Sponge Working Group has proceeded in exploring measures to ensure access to titanium sponge in the United States for use for national defense and in critical industries during an emergency, and at this time the Bureau of Industry and Security (BIS) is seeking public comments to better inform the deliberations of the working group.

DATES: The due date for filing original comments is January 11, 2021. The due date for rebuttal comments is January 25, 2021. Rebuttal comments may only address issues raised in the original comment it is filed under, which was filed on or before January 11, 2021.

ADDRESSES: *Submissions:* All written comments on the notice must be addressed to the Titanium Sponge Working Group and filed through the Federal eRulemaking Portal: *http://www.regulations.gov.* To submit comments via *http://www.regulations.gov,* enter docket number BIS–2020–0037 on the home page and click ''search.'' The site will provide a search results page listing all documents associated with this docket. Find a reference to this notice and click on the link entitled ''Comment Now!'' (For further information on using *http://www.regulations.gov,* please consult the resources provided on the website by clicking on ''How to Use This Site.'')

FOR FURTHER INFORMATION CONTACT: *TSWG@bis.doc.gov;* Titanium Sponge 232 Project Line 202–482–3110. Email is the preferred method of contact, and will facilitate a more timely response by BIS.

SUPPLEMENTARY INFORMATION:

Background

On March 4, 2019, in response to a petition, the Secretary initiated an investigation under Section 232 of the Trade Expansion Act of 1962, as amended (19 U.S.C. 1862), to determine the effects on the national security from imports of titanium sponge. This petition led the Bureau of Industry and Security (BIS) to publish a *Notice of Request for Public Comments on Section 232 National Security Investigation of Imports of Titanium Sponge* on March 8, 2019 (84 FR 8503). The March 8, 2019 notice requested comments specific to the status of the titanium sponge industrial base in the United States. While the comments received were pertinent, several developments have occurred since the end of that notice period that warrant this notice of request for additional comments.

On November 29, 2019, the Secretary transmitted to the President a report on the Section 232 investigation in which he found that titanium sponge imports threatened to impair the national security, and stated that there is a risk of the United States being completely dependent on imports of titanium sponge and could therefore lack surge capacity required to support defense and critical industries needs in an extended national emergency. On February 27, 2020, the President issued a memorandum regarding the Section 232 investigation into whether imports of titanium sponge threatened to impair the national security. The President concurred with the Secretary's finding that imports of titanium sponge threatened to impair U.S. national security, and also agreed with the Secretary's recommendation that he not take actions to adjust imports under Section 232 at that time. Instead, the President directed the Secretaries of Commerce and Defense to form a working group, along with other executive departments and agencies that they deemed appropriate, to develop recommended actions.

The Titanium Sponge Working Group (TSWG), established at the President's direction, consists of the following permanent members: The Departments of Commerce, Defense, Interior, and State, which are joined by rotating members from other U.S. Government agencies as needed. The goal of the TSWG is to reach interagency agreement on measures needed to ensure access to titanium sponge in the United States for

use for national defense and critical industries in an emergency. The TSWG will submit to the President a report detailing agreed upon recommendations to ensure U.S. access to titanium sponge for national defense and critical industries purposes, in addition to detailing the current and projected U.S. industrial requirements.

The establishment of the TSWG and the required report, along with the impact of the ongoing COVID–19 pandemic on U.S. access to titanium sponge, merit a comment period to solicit information to assist the interagency working group in its deliberations regarding imports of titanium sponge. The Department of Commerce (Department) has determined that although there is significant governmental expertise on the TSWG, receiving public input in this area would further the understanding of the TSWG members as they develop potential solutions to address the issue of imports of titanium sponge.

Although the President established the working group after he concurred with the Secretary that imports of titanium sponge threatened to impair the national security, the solicitation of comments to assist in the TSWG deliberations is distinct from the Department's prior Section 232 titanium sponge investigation. However, the Section 232 investigation and the TSWG both deal with the importance of access to titanium sponge for national defense and critical industries purposes. Therefore, BIS is handling the solicitation of comments similarly to how BIS has previously solicited comments for Section 232 investigations. The TSWG will consider the public comments when preparing interagency recommendations to the President for further consideration.

Written Comments

Interested parties are invited to submit written comments, data, analyses, or information pertinent to the task of the TSWG to the Department's Office of Technology Evaluation no later than January 11, 2021. An original comment will not be considered if: (1) It is received no later than January 11, 2021; (2) and/or includes rebuttal language pertaining to a different comment. Rebuttal comments may be submitted in response to issues raised in original comments received on or before January 11, 2021 may be filed no later than January 25, 2021. Rebuttal comments may only address issues raised in the original comment it is filed under, which was filed on or before January 11, 2021. Rebuttal comments that address new or different issues other than the issues raised in the original comment it was filed under will not be considered. A rebuttal comment will not be considered if: (1) It is received no later than January 25, 2021; (2) and/or includes language that is partially original and partially in response to an original comment.

The Department is particularly interested in comments and information directed to the following criteria:

(i) Potential measures to ensure access to titanium sponge in the United States for use for national defense and critical industries in an emergency, including, but not limited to, U.S. Government or industry investment in any portion of the U.S. titanium supply chain (including ore, sponge, semi-finished, and finished titanium products), stockpiling, multilateral negotiations, trade actions, and industrial base analyses.

(ii) Potential measures to increase access to titanium sponge in the United States for use for national defense and critical industries, and to support domestic production capacity for the production of titanium sponge to meet national defense requirements, including, but not limited to, U.S. Government or industry investment in any portion of the U.S. titanium supply chain (including ore, sponge, semi-finished, and finished titanium products), stockpiling, multilateral negotiations, trade actions, and industrial base analyses.

(iii) The structure of the global titanium sponge supply chain, including upstream (ore and other feedstock) and downstream (semi-finished and finished titanium products, increased usage of scrap) production steps, especially as the structure may impact recommendations targeting alternative parts of the titanium sponge supply chain in order to ensure and/or increase access to titanium sponge in the United States;

(iv) Pandemic-related impacts on the supply and demand of titanium sponge and other titanium products in the United States and abroad (such as the decline in aerospace demand, prospects for recovery, maintaining essential workforce, or the recent idling of U.S. sponge operations);

(v) The role of non-U.S. titanium sponge production and distribution in ensuring and/or increasing access to titanium sponge and domestic titanium sponge capacity in the United States, including prospects for partnerships or joint ventures between U.S. and non-U.S. sponge producers, trade actions (*e.g.,* modification of current global tariff/quota structures on titanium products), or non-U.S. investment in U.S. production capacity. Additionally, the impact of U.S.-reliance on single or sole source supplies of titanium sponge from non-U.S. sources; and

(vi) Prospects and risks of brownfield or greenfield investments in any step of the titanium supply chain, including upstream ore extraction and processing, intermediate titanium sponge production, or other downstream titanium production steps; and

(vii) How great of a threat is cybercrime or malicious cyber activity to organizations in the titanium sponge supply chain? In addressing this question, commenters are encouraged to provide specific examples of how malicious cyber activity such as ransomware, distributed denial of service (DDoS) attacks, or malware have undermined or threatened production in the U.S. and/or the reliability of U.S. supply chain for titanium sponge. Additionally, what actions or policies are recommended to strengthen the titanium sponge and related sectors' ability to prevent, detect, and recover from malicious cyber activity? In addressing this question, to what extent, if any, does dependence on foreign suppliers increase organizations' exposure to cybercrime/impacts or create any additional burdens because of the complexities involved with dealing with different countries' laws on cyber issues?

Requirements for Written Comments

The *http://www.regulations.gov* website allows users to provide comments by filling in a ''Type Comment'' field, or by attaching a document using an ''Upload File'' field. The Department prefers that comments be provided in an attached document. The Department prefers submissions in Microsoft Word (.doc) or Adobe Acrobat (.pdf). If the submission is in an application format other than Microsoft Word or Adobe Acrobat, please indicate the name of the application in the ''Type Comment'' field. Please do not attach separate cover letters to electronic submissions; rather, include any information that might appear in a cover letter within the comments. Similarly, to the extent possible please include any exhibits, annexes, or other attachments in the same file, so that the submission consists of one instead of multiple files. Comments will be placed in the docket and open to public inspection, except information determined to be confidential. Comments may be viewed on *http://www.regulations.gov* by entering docket number BIS–2020–0037 in the search field on the home page.

All filers should name their files using the name of the person or entity submitting the comments. Communications from agencies of the United States Government will not be made available for public inspection.

Material submitted by members of the public that is properly marked as business confidential information with a valid statutory basis for confidentiality, and which is accepted as such by the Department will not be disclosed publicly. Guidance on submitting business confidential information is as follows: Anyone submitting business confidential information should clearly identify the business confidential portion at the time of submission, include a statement justifying nondisclosure and referring to the specific legal authority claimed with the submission, and provide a non-confidential version of the submission which will be placed in the public file on *http://www.regulations.gov*. For comments submitted electronically containing business confidential information, the file name of the business confidential version should begin with the characters ''BC''. Any page containing business confidential information must be clearly marked ''BUSINESS CONFIDENTIAL'' on the top of that page. The non-confidential version must be clearly marked ''PUBLIC''. The file name of the non-confidential version should begin with the character ''P''. The ''BC'' and ''P'' should be followed by the name of the person or entity submitting the comments or rebuttal comments.

Matthew S. Borman,

Deputy Assistant Secretary for Export Administration.

[FR Doc. 2020–27119 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–33–P

DEPARTMENT OF COMMERCE

International Trade Administration

[C–533–872]

Finished Carbon Steel Flanges From India: Preliminary Results of Countervailing Duty Administrative Review and Intent To Rescind, in Part; 2018

AGENCY: Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) preliminarily determines that Norma (India) Ltd. (Norma) and R.N. Gupta & Co. Ltd (RNG) received countervailable subsidies during the period of review (POR), January 1, 2018 through December 31, 2018. In addition, we are announcing our intent to rescind this review with respect to two companies. Interested parties are invited to comment on these preliminary results.

DATES: Applicable December 10, 2020.

FOR FURTHER INFORMATION CONTACT: John McGowan or Tyler Weinhold, AD/CVD Operations, Office VI, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–3019 or (202) 482–1121, respectively.

SUPPLEMENTARY INFORMATION:

Background

On August 24, 2017, Commerce published in the **Federal Register** the countervailing duty (CVD) order on finished carbon steel flanges (steel flanges) from India.[1] On August 2, 2019, Commerce published a notice of opportunity to request an administrative review of the *Order*.[2] On September 3, 2019, Weldbend Corporation and Boltex Mfg. Co., L.P., (the petitioners), requested a review of 37 producers and/or exporters of subject merchandise.[3] Further, from August 29, 2019 through September 3, 2019, Norma,[4] RNG, Jai Auto Pvt. Ltd., and Bebitz Flanges Works Private Limited, foreign producers or exporters of subject merchandise, each requested a review of the *Order* with respect to themselves.[5] On October 7, 2019, Commerce published a notice of initiation of an administrative review of the *Order*.[6] Based on our examination of the Customs and Border Protection (CBP) data, on November 6, 2019, we selected Norma and RNG, the two largest producers and/or exporters, as mandatory respondents.[7]

On April 24, 2020, Commerce tolled all deadlines in administrative reviews by 50 days, thereby extending the deadline for these preliminary results until June 22, 2020.[8] Further, on June 19, 2020, Commerce extended the time period for issuing these preliminary results by 109 days, in accordance with section 751(a)(3)(A) of the Act, to October 8, 2020.[9] On July 21, 2020, Commerce again tolled all deadlines in administrative reviews by 60 days, thereby extending the deadline for these results until December 7, 2020.[10] For a complete description of the events that followed the initiation of this review, *see* the Preliminary Decision Memorandum.[11] A list of topics discussed in the Preliminary Decision Memorandum is included at Appendix I 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 *http://access.trade.gov.* In addition, a complete version of the Preliminary Decision Memorandum can be accessed directly at *http://enforcement.trade.gov/frn/.* The signed and electronic versions of the Preliminary Decision Memorandum are identical in content.

Scope of the Order

The merchandise covered by the *Order* is steel flanges. For a complete description of the scope of the *Order, see* the Preliminary Decision Memorandum.

[1] *See Finished Carbon Steel Flanges from India: Countervailing Duty Order,* 82 FR 40138 (August 24, 2017) (*Order*).

[2] *See Antidumping or Countervailing Duty Order, Finding, or Suspended Investigation; Opportunity to Request Administrative Review,* 84 FR 37834 (August 2, 2019).

[3] *See* Petitioners' Letter, ''Finished Carbon Steel Flanges from India: Request for Administrative Review,'' dated September 3, 2019 (Petitioners' Review Request).

[4] We note that Norma requested a review of itself and its affiliates USK Export Private Limited (USK); Uma Shanker Khandelwal and Co. (UMA); and Bansidhar Chiranjilal (BCL).

[5] *See* Norma's Letter, ''Finished Carbon Steel Flanges from India: Request for an Administrative Review,'' dated August 29, 2019; *see also* RNG's Letter, ''Finished Carbon Steel Flanges from India: Request for Countervailing Duty Administrative Review,'' August 30, 2019; Jai Auto Pvt. Ltd.'s Letter, ''Request for Review of Countervailing Duty Administrative Review of Finished Carbon Steel Flanges from India,'' dated August 30, 2019; and Bebitz Flanges Works Private Limited's Letter, ''Finished Carbon Steel Flanges from India: Requests for Administrative Review,'' dated September 3, 2019.

[6] *See Initiation of Antidumping and Countervailing Duty Administrative Reviews,* 84 FR 53411, 53421–53422 (October 7, 2019).

[7] *See* Memorandum, ''Countervailing Duty Administrative Review of Finished Carbon Steel Flanges from India: Respondent Selection,'' dated November 4, 2019.

[8] *See* Memorandum, ''Tolling of Deadlines for Antidumping and Countervailing Duty Administrative Reviews in Response to Operational Adjustments Due to COVID–19,'' dated April 24, 2020.

[9] *See* Memorandum, ''Finished Carbon Steel Flanges from India: Extension of Deadline for Preliminary Results of Countervailing Duty Administrative Review; 1/1/2018–12/31/2018,'' dated June 19, 2020.

[10] *See* Memorandum, ''Tolling of Deadlines for Antidumping and Countervailing Duty Administrative Reviews,'' dated July 21, 2020.

[11] *See* Memorandum, ''Decision Memorandum for the Preliminary Results of the Countervailing Duty Administrative Review of Finished Carbon Steel Flanges from India,'' dated concurrently with, and hereby adopted by, this notice (Preliminary Decision Memorandum).

Methodology

Commerce is conducting this review in accordance with section 751(a)(l)(A) of the Tariff Act of 1930, as amended (the Act). For each of the subsidy programs found countervailable, we preliminarily determine that there is a subsidy, *i.e.,* a government-provided financial contribution that gives rise to a benefit to the recipient, and that the subsidy is specific.[12] For a full description of the methodology underlying our conclusions, *see* the accompanying Preliminary Decision Memorandum.

Companies Not Selected for Individual Review

There are 31 companies for which a review was requested and not rescinded, and which were not selected as mandatory respondents. The statute and Commerce's regulations do not directly address the establishment of rates to be applied to companies not selected for individual examination where Commerce limits its examination in an administrative review pursuant to section 777A(e)(2) of the Act. However, Commerce normally determines the rates for non-selected companies in reviews in a manner that is consistent with section 705(c)(5) of the Act, which provides the basis for calculating the all-others rate in an investigation.

Section 705(c)(5)(A)(i) of the Act instructs Commerce, as a general rule, to calculate an all-others rate equal to the weighted average of the countervailable subsidy rates established for exporters and/or producers individually examined, excluding any zero, *de minimis,* or rates based entirely on facts available. In this review, none of the rates for respondents were zero, *de minimis,* or based entirely on facts available. For the companies for which a review was requested that were not selected as mandatory company respondents, and for which Commerce did not receive a timely request for withdrawal of review, and for which Commerce is not finding to be cross-owned with the mandatory company respondents, Commerce based the subsidy rate on a weighted-average of the subsidy rates calculated for the two mandatory respondents, Norma and RNG, using their publicly-ranged sales data for exports of subject merchandise to the United States during the POR. For further discussion, please see the All-Others Rate Calculation Memorandum.[13]

Intent To Rescind Administrative Review, in Part

On September 21, 2020, the petitioners stated that they had inadvertently included in their request for review Bebitz U.S.A., Inc., a United States importer.[14] Additionally, information on the record demonstrates that Silbo Industries, Inc. is a U.S. importer.[15] Because Commerce does not conduct reviews of U.S. importers, and because the CBP demonstrate that neither company exported subject merchandise to the United States during the POR,[16] we intend to rescind this review with respect to Bebitz U.S.A., Inc. and Silbo Industries, Inc. For further details, *see* the Preliminary Decision Memorandum.

Preliminary Results of Review

In accordance with 19 CFR 351.221(b)(4)(i), we calculated individual subsidy rates for Norma and RNG. For the period January 1, 2018 through December 31, 2018, we preliminarily determine that the following net countervailable subsidy rates exist:

Company	Subsidy rate (percent *ad valorem*)
Norma (India) Ltd[17]	5.61
R.N. Gupta & Co. Ltd	5.42
Companies Not Selected for Individual Examination (*see* Appendix II)	5.51

Assessment Rate

Consistent with section 751(a)(2)(C) of the Act, upon issuance of the final results, Commerce shall determine, and CBP shall assess, CVDs on all appropriate entries covered by this review. We intend to issue instructions to CBP 15 days after publication of the final results of this review.

Cash Deposit Rate

Pursuant to section 751(a)(1) of the Act, Commerce intends to instruct CBP to collect cash deposits of estimated CVDs in the amount indicated above with regard to shipments of subject merchandise entered, or withdrawn from warehouse, for consumption on or after the date of publication of the final results of this review. For all non-reviewed firms, we will instruct CBP to continue to collect cash deposits of estimated CVDs at the most recent company-specific or all-others rate applicable to the company, as appropriate. These cash deposit instructions, when imposed, shall remain in effect until further notice.

Disclosure and Public Comment

We will disclose to parties to this proceeding the calculations performed in reaching the preliminary results within five days of the date of publication of these preliminary results.[18] Interested parties may submit written comments (case briefs) within 30 days of publication of the preliminary results and rebuttal comments (rebuttal briefs) within seven days[19] after the time limit for filing case briefs.[20] Pursuant to 19 CFR 351.309(d)(2), rebuttal briefs must be limited to issues raised in the case briefs. Parties who submit arguments are requested to submit with the argument: (1) A statement of the issue; (2) a brief summary of the argument; and (3) a table of authorities.[21] Note that Commerce has temporarily modified certain of its requirements for serving documents containing business proprietary information, until further notice.[22]

Interested parties who wish to request a hearing must submit a written request to the Assistant Secretary for Enforcement and Compliance using Enforcement and Compliance's ACCESS system within 30 days of the publication of this notice.[23] Requests should contain: (1) The party's name, address, and telephone number; (2) the

[12] *See* sections 771(5)(B) and (D) of the Act regarding financial contribution; section 771(5)(E) of the Act regarding benefit; and section 771(5A) of the Act regarding specificity.

[13] *See* Memorandum, ''Preliminary Results Calculation for the 'All-Others' Rate,'' dated concurrently with this notice (All-Others Rate Calculation Memorandum).

[14] *See* Memorandum, ''Administrative Review of the Countervailing Duty Order on Finished Carbon Steel Flanges from India: Phone Call with Counsel to the Petitioners,'' dated September 23, 2020.

[15] *See* Silbo Industries, Inc.'s Letter, ''Silbo's Request to Rescind the Review: 2nd Administrative Review of the Countervailing Duty Order on Finished Carbon Steel Flanges from India (C–533–872),'' dated January 16, 2020.

[16] *See* Memorandum, ''Finished Carbon Steel Flanges from India: Release of U.S. Customs and Border Protection Import Data,'' dated October 18, 2019.

[17] In the investigation, Commerce found the following companies to be cross-owned with Norma (India) Ltd.: USK Export Private Limited (USK); Uma Shanker Khandelwal and Co. (UMA); and Bansidhar Chiranjilal (BCL). *See* Preliminary Decision Memorandum at 7; this finding is unchanged in these preliminary results. This rate applies to all cross-owned companies.

[18] *See* 19 CFR 351.224(b).

[19] *See Temporary Rule Modifying AD/CVD Service Requirements Due to COVID–19; Extension of Effective Period,* 85 FR 41363 (July 10, 2020) (*Temporary Rule*).

[20] *See* 19 CFR 351.309(c)(1)(ii) and 351.309(d)(1); *see also* 19 CFR 351.303 (for general filing requirements).

[21] *See* 19 CFR 351.309(c)(2) and 351.309(d)(2).

[22] *See Temporary Rule.*

[23] *See* 19 CFR 351.310(c).

number of participants, whether any participant is a foreign national; and (3) a list of the issues to be discussed. If a request for a hearing is made, Commerce intends to hold the hearing at a time and date to be determined.[24] Issues addressed during the hearing will be limited to those raised in the briefs.[25] Parties should confirm by telephone the date and time of the hearing two days before the scheduled date.

Parties are reminded that all briefs and hearing requests must be filed electronically using ACCESS and received successfully in their entirety by 5 p.m. Eastern Time on the due date.

Unless the deadline is extended pursuant to section 751(a)(3)(A) of the Act, Commerce intends to issue the final results of this administrative review, including the results of our analysis of the issues raised by the parties in their comments, within 120 days after publication of these preliminary results.

This administrative review and notice are in accordance with sections 751(a)(1) and 777(i)(1) of the Act and 19 CFR 351.213.

Dated: December 3, 2020.

Jeffrey I. Kessler,

Assistant Secretary for Enforcement and Compliance.

Appendix I

List of Topics Discussed in the Preliminary Decision Memorandum

I. Summary
II. Background
III. Intent to Rescind, in Part
IV. Scope of the Order
V. Period of Review
VI. Subsidies Valuation Information
VII. Benchmark Interest Rates and Discount Rates
VIII. Analysis of Programs
IX. Conclusion

Appendix II

Companies Not Selected for Individual Examination

1. Adinath International
2. Allena Group
3. Alloyed Steel
4. Bebitz Flanges Works Private Limited
5. C.D. Industries
6. CHW Forge
7. CHW Forge Pvt. Ltd.
8. Citizen Metal Depot
9. Corum Flange
10. DN Forge Industries
11. Echjay Forgings Limited
12. Falcon Valves and Flanges Private Limited
13. Heubach International
14. Hindon Forge Pvt. Ltd.
15. Jai Auto Pvt. Ltd.
16. Kinnari Steel Corporation
17. Mascot Metal Manufacturers
18. M F Rings and Bearing Races Ltd.
19. OM Exports
20. Punjab Steel Works (PSW)
21. Raaj Sagar Steel
22. Ravi Ratan Metal Industries
23. R. D. Forge
24. Rolex Fittings India Pvt. Ltd.
25. Rollwell Forge Pvt. Ltd.
26. SHM (ShinHeung Machinery)
27. Siddhagiri Metal & Tubes
28. Sizer India
29. Steel Shape India
30. Sudhir Forgings Pvt. Ltd.
31. Tirupati Forge

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[24] *See* 19 CFR 351.310.

[25] *See* 19 CFR 351.310(c).

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–131]

Twist Ties From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The U.S. Department of Commerce (Commerce) preliminarily determines that twist ties from the People's Republic of China (China) are being, or are likely to be, sold in the United States at less than fair value (LTFV). The period of investigation is October 1, 2019 through March 31, 2020. Interested parties are invited to comment on this preliminary determination.

DATES: Applicable December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Alex Wood or Brittany Bauer, AD/CVD Operations, Office II, Enforcement & Compliance, International Trade Administration, Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–1959 or (202) 482–3860, respectively.

SUPPLEMENTARY INFORMATION:

Background

This preliminary determination is made in accordance with section 733(b) of the Tariff Act of 1930, as amended (the Act). Commerce published the notice of initiation of this investigation on July 27, 2020.[1] For a complete description of the events that followed the initiation of this investigation, *see* the Preliminary Decision Memorandum.[2] A list of topics included in the Preliminary Decision Memorandum is included as Appendix II 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 *http://enforcement.trade.gov/frn/.* The signed and the electronic versions of the Preliminary Decision Memorandum are identical in content.

Scope of the Investigation

The products covered by this investigation are twist ties from China. For a complete description of the scope of this investigation, *see* Appendix I to this notice.

Scope Comments

In accordance with the preamble to Commerce's regulations,[3] the *Initiation Notice* set aside a period of time for parties to raise issues regarding product coverage (scope).[4] Certain interested parties commented on the scope of the investigation as it appeared in the *Initiation Notice.* For a summary of the product coverage comments and rebuttal responses submitted to the record for this investigation, and accompanying discussion and analysis of all comments timely received, *see* the Preliminary Scope Determination Memorandum.[5] Commerce is preliminarily modifying the scope language as it appeared in the *Initiation Notice. See* the revised scope in Appendix I to this notice.

Methodology

Commerce is conducting this investigation in accordance with section 731 of the Act. Pursuant to sections 776(a) and (b) of the Act, Commerce preliminarily has relied upon facts otherwise available, with adverse

[1] *See Twist Ties from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigations,* 85 FR 45161 (July 27, 2020) (*Initiation Notice*).

[2] *See* Memorandum, ''Decision Memorandum for the Preliminary Determination of the Less-Than-Fair-Value Investigation of Twist Ties from People's Republic of China (Preliminary Decision Memorandum), dated concurrently with, and hereby adopted by, this notice; *see also* Appendix I.

[3] *See Antidumping Duties; Countervailing Duties,* 62 FR 27296, 27323 (May 19, 1997).

[4] *See Initiation Notice.*

[5] *See* Memorandum, ''Antidumping and Countervailing Duty Investigations of Twist Ties from the People's Republic of China: Scope Comments Decision Memorandum for the Preliminary Determinations,'' dated November 23, 2020 (Preliminary Scope Determination Memorandum).

inferences, with respect to the China-wide entity. The China-wide entity includes mandatory respondents Zhenjiang Hongda Commodity Co., Ltd. (Zhenjiang Hongda) and Zhenjiang Zhonglian I/E Co., Ltd. (Zhenjiang Zhonglian).[6] These companies failed to respond to Commerce's requests for information and withdrew from participation in this investigation. For a full description of the methodology underlying Commerce's preliminary determination, *see* the Preliminary Decision Memorandum.

Combination Rates

In the *Initiation Notice*,[7] Commerce stated that it would calculate producer/exporter combination rates for the respondents that are eligible for a separate rate in this investigation. Policy Bulletin 05.1 describes this practice.[8] In this investigation, we assigned producer/exporter combination rates for respondents eligible for separate rates.

Preliminary Determination

Commerce preliminarily determines that the following estimated weighted-average dumping margins exist:

Producer	Exporter	Estimated weighted-average dumping margin (percent)	Cash deposit rate (adjusted for subsidy offsets) (percent)
Rongfa Plastic Products Co., Ltd. (also known as Zhenjiang Rongfa Plastic Co., Ltd).	Rongfa Plastic Products Co., Ltd. (also known as Zhenjiang Rongfa Plastic Co., Ltd).	72.96	62.42
Tianjin Kyoei Packaging Supplies Co., Ltd	Tianjin Kyoei Packaging Supplies Co., Ltd	72.96	62.42
China-Wide Entity[9]		72.96	62.42

Suspension of Liquidation

In accordance with section 733(d)(2) of the Act, Commerce will direct U.S. Customs and Border Protection (CBP) to suspend liquidation of subject merchandise as described in the scope of the investigation section entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register**, as discussed below. Further, pursuant to section 733(d)(1)(B) of the Act and 19 CFR 351.205(d), Commerce will instruct CBP to require a cash deposit equal to the weighted average amount by which normal value exceeds U.S. price, as indicated in the chart above as follows: (1) For the producer/exporter combinations listed in the table above, the cash deposit rate is equal to the estimated weighted-average dumping margin listed for that combination in the table; (2) for all combinations of Chinese producers/exporters of merchandise under consideration that have not established eligibility for their own separate rates, the cash deposit rate will be equal to the estimated weighted-average dumping margin established for the China-wide entity; and (3) for all third-country exporters of merchandise under consideration not listed in the table above, the cash deposit rate is the cash deposit rate applicable to the Chinese producer/exporter combination (or China-wide entity) that supplied that third-country exporter.

To determine the cash deposit rate, Commerce normally adjusts the estimated weighted-average dumping margin by the amount of domestic subsidy pass-through and export subsidies determined in a companion CVD proceeding when CVD provisional measures are in effect. Accordingly, Commerce has made a preliminary affirmative determination for an export subsidy adjustment. However, Commerce has not made a preliminary affirmative determination for a domestic subsidy pass-through adjustment in this investigation. Commerce has offset the estimated weighted-average dumping margin by the appropriate rate. Any such adjusted rates may be found in the chart of estimated weighted-average dumping margins in the ''Preliminary Determination'' section above.

Should provisional measures in the companion CVD investigation expire prior to the expiration of provisional measures in this LTFV investigation, Commerce will direct CBP to begin collecting cash deposits at a rate equal to the estimated weighted-average dumping margins calculated in this preliminary determination unadjusted for export subsidies at the time the CVD provisional measures expire.

These suspension of liquidation instructions will remain in effect until further notice.

Disclosure

Normally, Commerce discloses to interested parties the calculations performed in connection with a preliminary determination within five days of its public announcement or, if there is no public announcement, within five days of the date of publication of this notice in accordance with 19 CFR 351.224(b). However, because Commerce preliminarily determined that the mandatory respondents should be considered to be part of the China-wide entity and assigned the China-wide entity an AFA rate based solely on the petition, there are no calculations to disclose.

Verification

Because the mandatory respondents in this investigation did not provide information requested by Commerce and Commerce preliminarily determines in accordance with section 776(b) of the Act that each of the mandatory respondents to have been uncooperative, verification will not be conducted.

Public Comment

Case briefs or other written comments may be submitted to Enforcement and Compliance's Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS) no later than 30 days after the date of publication of the preliminary determination, unless the Secretary alters the time limit. Rebuttal briefs, limited to issues raised in case briefs, may be submitted no later than seven days after the deadline date for case

[6] *See* Memorandum, ''Less-Than-Fair-Value Investigation of Twist Ties from the People's Republic of China: Respondent Selection,'' dated August 17, 2020 (Respondent Selection Memorandum); *see also* Zhenjiang Hongda and Zhenjiang Zhonglian's Letter, ''Twist Ties from the People's Republic of China: Withdrawal of Zhenjiang Hongda and Zhenjiang Zhonglian from the Antidumping Duty Investigation and Counsel's Certification of Compliance with the Terms of the APO,'' dated August 24, 2020.

[7] *See Initiation Notice* at 45164.

[8] *See* Enforcement and Compliance's Policy Bulletin No. 05.1, regarding, ''Separate-Rates Practice and Application of Combination Rates in Antidumping Investigations involving Non-Market Economy Countries,'' (April 5, 2005) (Policy Bulletin 05.1), available on Commerce's website at *http://enforcement.trade.gov/policy/bull05-1.pdf.*

[9] The China-Wide Entity includes Zhenjiang Hongda and Zhenjiang Zhonglian.

briefs.[10] Parties who submit case briefs or rebuttal briefs in this investigation are encouraged to submit with each argument: (1) A statement of the issue; (2) a brief summary of the argument; and (3) a table of authorities.[11]

Pursuant to 19 CFR 351.310(c), interested parties who wish to request a hearing, limited to issues raised in the case and rebuttal briefs, must submit a written request to the Assistant Secretary for Enforcement and Compliance, U.S. Department of Commerce, within 30 days after the date of publication of this notice. Requests should contain the party's name, address, and telephone number, the number of participants, whether any participant is a foreign national, and a list of the issues to be discussed. If a request for a hearing is made, Commerce intends to hold the hearing at a time and date to be determined. Parties should confirm by telephone the date, time, and location of the hearing two days before the scheduled date.

Parties must file their case and rebuttal briefs, and any requests for a hearing, electronically using Commerce's electronic records system, ACCESS.[12] Electronically filed documents must be received successfully in their entirety by 5:00 p.m. Eastern Time,[13] on the due dates established above. Note that Commerce has temporarily modified certain of its requirements for serving documents containing business proprietary information, until further notice.[14]

Final Determination

Section 735(a)(1) of the Act and 19 CFR 351.210(b)(1) provide that Commerce will issue the final determination within 75 days after the date of its preliminary determination. Accordingly, Commerce will make its final determination no later than 75 days after the signature date of this preliminary determination.

International Trade Commission Notification

In accordance with section 733(f) of the Act, Commerce will notify the International Trade Commission (ITC) of its preliminary determination of sales at LTFV. If the final determination is affirmative, the ITC will determine before the later of 120 days after the date of this preliminary determination or 45 days after the final determination whether imports of the subject merchandise are materially injuring, or threaten material injury to, the U.S. industry.

Notification to Interested Parties

This determination is issued and published in accordance with sections 733(f) and 777(i)(1) of the Act and 19 CFR 351.205(c).

Dated: December 3, 2020.

Jeffrey I. Kessler,

Assistant Secretary for Enforcement and Compliance.

Appendix I

Scope of the Investigation

The merchandise covered by this investigation consists of twist ties, which are thin, bendable ties for closing containers, such as bags, bundle items, or identifying objects. A twist tie in most circumstances is comprised of one or more metal wires encased in a covering material, which allows the tie to retain its shape and bind against itself. However, it is possible to make a twist tie with plastic and no metal wires. The metal wire that is generally used in a twist tie is stainless or galvanized steel and typically measures between the gauges of 19 (.0410″ diameter) and 31 (.0132″) (American Standard Wire Gauge). A twist tie usually has a width between .075″ and 1″ in the cross-machine direction (width of the tie—measurement perpendicular with the wire); a thickness between .015″ and .045″ over the wire; and a thickness between .002″ and .020″ in areas without wire. The scope includes an all-plastic twist tie containing a plastic core as well as a plastic covering (the wing) over the core, just like paper and/or plastic in a metal tie. An all-plastic twist tie (without metal wire) would be of the same measurements as a twist tie containing one or more metal wires. Twist ties are commonly available individually in pre-cut lengths (''singles''), wound in large spools to be cut later by machine or hand, or in perforated sheets of spooled or single twist ties that are later slit by machine or by hand (''gangs'').

The covering material of a twist tie may be paper (metallic or plain), or plastic, and can be dyed in a variety of colors with or without printing. A twist tie may have the same covering material on both sides or one side of paper and one side of plastic. When comprised of two sides of paper, the paper material is bound together with an adhesive or plastic. A twist tie may also have a tag or label attached to it or a pre-applied adhesive attached to it.

Excluded from the scope of the order are twist ties packaged with bags for sale together where the quantity of twist ties does not exceed twice the number of bags in each package. Also excluded are twists ties that constitute part of the packaging of the imported product, for example, merchandise anchored/secured to a backing with twist ties in the retail package or a bag of bread that is closed with a twist tie.

Twist ties are imported into the United States under Harmonized Tariff Schedule of the United States (HTSUS) subheadings 8309.90.0000 and 5609.00.3000. Subject merchandise may also enter under HTSUS subheadings 3920.51.5000, 3923.90.0080, 3926.90.9990, 4811.59.6000, 4821.10.2000, 4821.10.4000, 4821.90.2000, 4821.90.4000, and 4823.90.8600. These HTSUS subheadings are provided for reference only. The written description of the scope of the investigation is dispositive.

Appendix II

List of Topics Discussed in the Preliminary Decision Memorandum

I. Summary
II. Background
III. Period of Investigation
IV. Scope Comments
V. Scope of the Investigation
VI. Discussion of the Methodology
VII. Adjustment Under Section 777A(f) of the Act
VIII. Adjustments to Cash Deposit Rates for Export Subsidies
IX. Verification
X. ITC Notification
XI. Recommendation

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[10] *See* 19 CFR 351.309; *see also* 19 CFR 351.303 (for general filing requirements).

[11] *See* 19 CFR 351.309(c)(2) and (d)(2).

[12] *See* 19 CFR 351.303(b)(2)(i).

[13] *See* 19 CFR 351.303(b)(1).

[14] *See Temporary Rule Modifying AD/CVD Service Requirements Due to COVID–19; Extension of Effective Period,* 85 FR 41363 (July 10, 2020).

DEPARTMENT OF COMMERCE

International Trade Administration

[A–583–854]

Certain Steel Nails From Taiwan: Partial Rescission of Antidumping Duty Administrative Review; 2019–2020

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) is rescinding the administrative review, in part, of the antidumping duty order on certain steel nails from Taiwan for the period July 1, 2019 through June 30, 2020.

DATES: Applicable December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Irene Gorelik, AD/CVD Operations, Office VIII, Enforcement and Compliance, International Trade Administration, Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–6905.

SUPPLEMENTARY INFORMATION:

Background

On September 3, 2020, based on timely requests for review by Mid Continent Steel & Wire, Inc. (the petitioner), a domestic producer and

interested party,[1] and nine Taiwanese companies,[2] Commerce published in the **Federal Register** a notice of initiation of an administrative review of the antidumping duty order on certain steel nails from Taiwan covering 141 companies and the period July 1, 2019 through June 30, 2020.[3]

On September 21, 2020, the petitioner timely withdrew its request for administrative review of all companies originally requested, except for one company, Create Trading Co., Ltd.[4] As noted above, nine Taiwanese companies also self-requested an administrative review. On October 15, 2020, pursuant to 19 CFR 351.213(d)(1), Commerce rescinded the administrative review, in part, of all companies under review except for Create Trading Co., Ltd. and the nine companies that self-requested an administrative review and for which their requests for review had not been withdrawn at that time.[5] Subsequently, on November 30, 2020, the nine Taiwanese companies timely withdrew their requests for review.[6]

Partial Rescission of Review

Pursuant to 19 CFR 351.213(d)(1), Commerce will rescind an administrative review, in whole or in part, if the party that requested the review withdraws its request within 90 days of the publication of the notice of initiation of the requested review. Because all requests for administrative review of the nine companies that self-requested review were withdrawn within 90 days of the date of publication of the *Initiation Notice* and no other interested party requested a review of these nine companies, in accordance with 19 CFR 351.213(d)(1), Commerce is rescinding this review with respect to these companies: (1) China Staple Enterprise Corporation, (2) Hor Liang Industrial Corp., (3) Hoyi Plus Co., Ltd., (4) Liang Chyuan Industrial Co., Ltd., (5) Romp Coil Nail Industries Inc., (6) Trim International Inc., (7) UJL Industries Co., Ltd., (8) Yu Chi Hardware Co., Ltd., and (9) Zon Mon Co., Ltd.

The administrative review remains active only with respect to Create Trading Co., Ltd., which has filed a certification of no reviewable sales.[7]

Assessment

Commerce will instruct U.S. Customs and Border Protection (CBP) to assess antidumping duties on all appropriate entries at a rate equal to the cash deposit of estimated antidumping duties required at the time of entry, or withdrawal from warehouse, for consumption, during the period July 1, 2019 through June 30, 2020, in accordance with 19 CFR 351.212(c)(1)(i). Commerce intends to issue appropriate assessment instructions to CBP 15 days after the publication of this notice in the **Federal Register**.

Notification to Importers

This notice serves as a final 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 the antidumping duties occurred and the subsequent assessment of doubled antidumping duties.

Notification Regarding Administrative Protective Order

This notice also serves as a reminder to parties subject to 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)(3), which continues to govern business proprietary information in this segment of the proceeding. Timely written 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.

This notice is issued and published in accordance with sections 751(a)(1) and 777(i)(1) of the Tariff Act of 1930, as amended, and 19 CFR 351.213(d)(4).

Dated: December 7, 2020.

James Maeder,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

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[1] *See* Petitioner's Letter, ''Request for Administrative Review,'' dated July 31, 2020 (Petitioner's Review Request).

[2] *See* Letter, ''Administrative Review Request,'' dated July 31, 2020, collectively from: Liang Chyuan Industrial Co., Ltd., Romp Coil Nail Industries Inc., UJL Industries Co., Ltd., Hor Liang Industrial Corp., Yu Chi Hardware Co., Ltd., Trim International Inc., China Staple Enterprise Corporation, Hoyi Plus Co., Ltd., and Zon Mon Co., Ltd.

[3] *See Initiation of Antidumping and Countervailing Duty Administrative Reviews,* 85 FR 54983 (September 3, 2020) (*Initiation Notice*). As the Petitioner's Review Request included three instances of duplicated company names, Commerce only counted the duplicated company names one time upon initiation, with the exception of Yu Chi Hardware Co., Ltd. which the petitioner listed twice and was also inadvertently listed twice in the *Initiation Notice.*

[4] *See* Petitioner's Letter, ''Withdrawal of Request for Administrative Reviews,'' dated September 21, 2020.

[5] *See Certain Steel Nails From Taiwan: Partial Rescission of Antidumping Duty Administrative Review; 2019–2020,* 85 FR 65366 (October 15, 2020) (*First Partial Rescission*).

[6] *See* Letter, ''Withdrawal of Administrative Review Request,'' dated November 30, 2020, collectively from: Liang Chyuan Industrial Co., Ltd., Romp Coil Nail Industries Inc., UJL Industries Co., Ltd., Hor Liang Industrial Corp., Yu Chi Hardware Co., Ltd., Trim International Inc., China Staple Enterprise Corporation, Hoyi Plus Co., Ltd., and Zon Mon Co., Ltd.

[7] *See* Create Trading Co., Ltd.'s Letter, ''Statement of No Sales to the United States,'' dated September 21, 2020.

DEPARTMENT OF COMMERCE

International Trade Administration

[A–351–843]

Cold-Rolled Steel Flat Products From Brazil; Rescission of Antidumping Administrative Review; 2019–2020

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) is rescinding the administrative review of the antidumping duty (AD) order on cold-rolled steel flat products from Brazil for the period of review (POR) September 1, 2019, through August 31, 2020, based on the timely withdrawal of the requests for review.

DATES: Applicable December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Dusten Hom, AD/CVD Operations, Office I, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–5075.

SUPPLEMENTARY INFORMATION:

Background

On September 1, 2020, Commerce published a notice of opportunity to request an administrative review of the AD order on cold-rolled steel flat products from Brazil for the POR September 1, 2019, through August 31, 2020.[1] Commerce received timely-filed requests for an administrative review from Nucor Corporation and United States Steel Corporation (collectively, the Domestic Interested Parties), in accordance with section 751(a) of the Tariff Act of 1930, as amended (the Act),

[1] *See Antidumping or Countervailing Duty Order, Finding, or Suspended Investigation; Opportunity to Request Administrative Review,* 85 FR 54349 (September 1, 2020).

and 19 CFR 351.213(b).[2] Commerce received no other requests for administrative review.

On October 30, 2020, pursuant to these requests and in accordance with 19 CFR 351.221(c)(1)(i), Commerce published a notice initiating an administrative review of the AD order on cold-rolled steel flat products from Brazil.[3] On November 25, 2020, the Domestic Interested Parties withdrew their request for an administrative review of all companies for which they had requested a review.[4]

Rescission of Review

Pursuant to 19 CFR 351.213(d)(1), Commerce will rescind an administrative review, in whole or in part, if the party or parties that requested a review withdraws the request within 90 days of the publication date of the notice of initiation of the requested review. As noted above, the Domestic Interested Parties withdrew their requests for review of all companies within 90 days of the publication date of the notice of initiation. No other parties requested an administrative review of the order. Therefore, in accordance with 19 CFR 351.213(d)(1), we are rescinding the administrative review of the AD order on cold-rolled steel flat products from Brazil covering September 1, 2019, through August 31, 2020, in its entirety.

Assessment

Commerce will instruct U.S. Customs and Border Protection (CBP) to assess antidumping duties on all appropriate entries of cold-rolled steel flat products from Brazil during the POR. Antidumping duties shall be assessed at rates equal to the cash deposit of 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). Commerce intends to issue appropriate assessment instructions to CBP 15 days after the date of publication of this notice in the **Federal Register**.

Notification to Importers

This notice serves as the only reminder to importers whose entries will be liquidated as a result of this rescission notice, 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 the presumption that reimbursement of the antidumping duties occurred and the subsequent assessment of double antidumping duties.

Notification Regarding Administrative Protective Orders

This notice also serves as the only reminder to all parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written 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 sanctionable violation.

Notification to Interested Parties

This notice is issued and published in accordance with sections 751(a)(1) and 777(i)(1) of the Act, and 19 CFR 351.213(d)(4).

Dated: December 4, 2020.

James Maeder,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2020–27140 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–DS–P

[2] *See* the Domestic Interested Parties' Letter, ''Cold-Rolled Steel Flat Products from Brazil: Request for Administrative Review of Antidumping Duty Order,'' dated September 30, 2020.

[3] *See Initiation of Antidumping and Countervailing Duty Administrative Reviews,* 85 FR 68840 (October 30, 2020).

[4] *See* the Domestic Interested Parties' Letter, ''Cold-Rolled Steel Flat Products from Brazil: Withdrawal of Request for Administrative Review of Antidumping Duty Order,'' dated November 25, 2020.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Emergency Beacon Registrations

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on August 19th, 2020 (85 FR 51021) during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Oceanic & Atmospheric Administration (NOAA), Commerce.

Title: Emergency Beacon Registrations.

OMB Control Number: 0648–0295.

Form Number(s): None.

Type of Request: Regular submission: Extension of a current information collection.

Number of Respondents: 208,762.

Average Hours per Response: 15 minutes.

Total Annual Burden Hours: 52,191.

Needs and Uses: The United States, Canada, France, and Russia operate the Search and Rescue Satellite-Aided Tracking (COSPAS/SARSAT), a satellite system with equipment that can detect and locate ships, aircraft and individuals in distress if an emergency radio beacon is being carried. This system is used to detect digitally encoded signals in the 406.000–406.100 MHz range, coming from these emergency beacons. The 406.000–406.100 MHz beacons transmit a unique identifier, making possible the ability to combine previously collected data associated with that beacon and transmit this vital data along with the beacon's position to the appropriate rescue coordination center.

Persons buying 406.000–406.100 MHz emergency radio beacons are required to register them with NOAA prior to installation. These requirements are contained in Federal Communications Commission (FCC) regulations at *47 CFR 80.1061, 47 CFR 87.199* and *47 CFR 95.1402.*

The registration data is used to facilitate a rescue and to suppress the costly consequences of false alarms, which if unsuppressed would initiate the launch of a rescue mission and thereby deplete limited resources and possibly result in the loss of lives. This is accomplished through the use of the data provided to the rescue forces from the beacon registration database maintained by the NOAA's United States Mission Control Center (USMCC) for Search and Rescue, to contact the distressed person(s) or alternate party via a phone call or radio broadcast. Other data provides rescuers with descriptive material of the element in distress. The registration information must be kept up-to-date.

Four registration forms are used. The EPIRB (Emergency Position Indicating Radio Beacon) form is used for nautical

beacons. The ELT (Emergency Locator Transmitter) form is used for aircraft beacons. The PLB (Personal Locator Beacon) is used to register portable beacons carried by individuals. Ship Security Alerting System (SSAS) beacons are carried aboard ships, are similar to EPIRBs and are used in the event of an emergency situation such as piracy or terrorism.

Affected Public: Individuals or households; Business or other for-profit organizations; Not-for-profit institutions; State, Local, or Tribal government; Federal government.

Frequency: As Required.

Respondent's Obligation: Mandatory.

Legal Authority: Federal Communications Commission (FCC) regulations at *47 CFR 80.1061, 47 CFR 87.199* and *47 CFR 95.1402.*

This information collection request may be viewed at *www.reginfo.gov.* Follow the instructions to view the Department of Commerce collections currently under review by OMB.

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 and entering either the title of the collection or the OMB Control Number 0648–0295.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2020–27112 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–HR–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Observer Programs' Information That Can Be Gathered Only Through Questions

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on July 31, 2020, (85 FR 46071) during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Oceanic and Atmospheric Administration.

Title: Observer Programs' Information That Can be Gathered Only Through Questions.

OMB Control Number: 0648–0593.

Form Number(s): None.

Type of Request: Regular submission (Extension and revision of a current information collection request).

Number of Respondents: 13,935 observed annual fishing trips.

Average Hours Per Response: Northeast Fisheries Observer Program and At-Sea Monitors, 117 minutes; North Pacific Groundfish and Halibut Observer Program and Processing Plants, 56 minutes; Alaska Marine Mammal Observer Program, 15 minutes; West Coast Groundfish Observer Program, 58 minutes; Pacific Islands Region Observer Program, 86 minutes; Southeast Shark Fishery Observer Program, 75 minutes; Southeast Pelagic Observer Program, 85 minutes; Gulf of Mexico Reef Fish and Shrimp Observer Program, 110 minutes; West Coast Region Observer Program, 62 minutes; Southeast Reef Fish Program, 75 minutes. Information will be collected for observed fishing trips and deployments to fish processing plants; therefore, there will be multiple responses for some respondents, but counted as one response per trip or plant visit.

Total Annual Burden Hours: 18,436 hours.

Needs and Uses: The information collected will be used to: (1) Monitor catch and bycatch in Federally managed fisheries; (2) monitor interactions with protected resources (*e.g.,* marine mammals and sea turtles); (3) understand the population status and trends of fish stocks and protected species, as well as the interactions between them; (4) determine the quantity and distribution of net benefits derived from living marine resources; (5) predict the biological, ecological, and economic impacts of existing management measures and alternative proposed management measures, and (6) understand safety risk for observers.

Comprehensive catch and bycatch information is an essential component of all stock assessments and is necessary for the development of effective fisheries and protected resource management strategies. At-sea observer programs are the most reliable method of collecting bycatch information. The MSA requires implementation of annual catch limits for all federally managed fisheries. Bycatch data collected by at-sea observer programs are an essential component in the estimation of total catch because bycatch approaches or exceeds landed catch in some fisheries and is a significant part of the total catch in many other fisheries. Analysis of catch, bycatch, and fishing effort information collected by observers also supports development of and recommendations within take reduction plans, biological opinions, and fishery management plans. Observer data are also used to assess the impact of experimental fisheries, monitor the effectiveness of bycatch reduction technologies, and enforce fisheries regulations.

In general, analysis of catch and bycatch, cost, revenue, and employment information for fishing vessels will assist analysts in estimating:

1. Environmental impacts of proposed regulations
2. Net economic value to the nation
3. Economic health of the fisher
4. Effects on business efficiency
5. Community economic impacts
6. Firms' economic dependence on the fishery
7. Economic impacts of proposed regulations, including area closures, gear restrictions, and catch or bycatch restrictions
8. Distribution of economic impacts from proposed regulations and, in particular, the significance of impacts on small businesses
9. Likelihood of bankruptcies
10. Effects on international competitiveness

There have been five changes since the last approval of the collection. The first is the addition of emergency health and safety questions related to the COVID–19 pandemic (covered by the June 12, 2020 emergency approval). The second is the expansion of observers to include an additional fishery. The Southeast region will begin sending observers out on Southeast reef fish fishery trips and thus needs to add this fishery to this collection. The third is a combination of two programs previously listed as separate; the Gulf of Mexico reef fish and shrimp program and grouper snapper program. The fourth is the West Coast Groundfish Observer Program (WCGOP) would like to start collecting the names of crew members within their observer logbooks. The data

will be recorded on paper, scanned in, and stored according to vessel name. This information will only be accessed if there is an enforcement issue. The final change is also within the West Coast Groundfish Observer Program. They have introduced a new phone app that captains are using to declare upcoming fishing trips and NMFS is using to let them know if they have been selected for observer coverage.

Additionally, some forms have been removed from this OMB Control Number as they are completed based upon direct observation by an employee or agent of the sponsoring agency and are therefore exempt from the PRA requirements. (5 CFR 1320.3(h)(3)). A list of all forms—those requiring OMB approval and those that do not—is being submitted with the revision package.

Affected Public: Business or other for-profit organizations.

Frequency: The frequency depends on the observer program. Some programs require observers on every trip while other programs require observers at a lower frequency as assigned through a random stratified design.

Respondent's Obligation: Some questions are voluntary, others are mandatory.

Legal Authority: The Magnuson-Stevens Fishery Conservation and Management Act (MSA) provides authority to require observer coverage on a vessel or at a fish processing plant for the purpose of collecting information necessary for fishery conservation and management. Observers are also authorized to be deployed under the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA) to collect information on species protected under those authorities. Section 303(b)(8) of the MSA states that any fishery management plan which is prepared by any Council, or by the Secretary of Commerce (Secretary), with respect to any fishery, may require that one or more observers be carried on board a vessel of the United States engaged in fishing for species that are subject to the plan, for the purpose of collecting data necessary for the conservation and management of the fishery; Sec. 403(a) requires the Secretary to promulgate regulations for fishing vessels that carry observers; and Sec. 403(b)(1) requires the Secretary to establish programs to ensure that each observer receives adequate training in collecting and analyzing the information necessary for the conservation and management purposes. Similar authority to place observers on fishing vessels is provided by Sec. 118 of the MMPA (50 U.S.C. Part 229) and Parts 222 and 223 (U.S.C.) of the ESA.

This information collection request may be viewed at *www.reginfo.gov.* Follow the instructions to view the Department of Commerce collections currently under review by OMB.

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 and entering either the title of the collection or the OMB Control Number 0648 –0593.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2020–27113 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XA628]

Fisheries Off West Coast States; Pacific Coast Groundfish Fishery; Trawl Rationalization Program; 2021 Cost Recovery Fee Notice

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice, 2021 cost recovery fee percentages and average mothership cooperative program pricing.

SUMMARY: This action provides participants in the Pacific Coast Groundfish Trawl Rationalization Program with the 2021 cost recovery fee percentages and the average mothership (MS) price per pound to be used in the catcher/processor (C/P) coop program to calculate the fee amount for the upcoming calendar year. For the 2021 calendar year, NMFS announces the following fee percentages by sector specific program: 2.5 percent for the Shorebased Individual Fishing Quota (IFQ) Program; 1.3 percent for the MS Co-op Program; and 0.2 percent for the C/P Co-op Program. For 2021, the MS pricing to be used as a proxy by the C/P Co-op Program is $0.09/lb for Pacific whiting.

DATES: Applicable January 1, 2021.

FOR FURTHER INFORMATION CONTACT: Keeley Kent, (206) 247–8252, *keeley.kent@noaa.gov.*

SUPPLEMENTARY INFORMATION: Section 304(d) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) authorizes and requires NMFS to collect fees to recover the costs directly related to the management, data collection and analysis, and enforcement directly related to and in support of a limited access privilege program (LAPP) (16 U.S.C. 1854(d)(2)), also called ''cost recovery.'' Cost recovery fees recover the actual costs directly related to the management, data collection and analysis, and enforcement of the programs (Section 303A(e)). Section 304(d) of the Magnuson-Stevens Act mandates that cost recovery fees not exceed 3 percent of the annual ex-vessel value of fish harvested by a program subject to a cost recovery fee, and that the fee be collected either at the time of landing, filing of a landing report, or sale of such fish during a fishing season or in the last quarter of the calendar year in which the fish is harvested.

The Pacific Coast Groundfish Trawl Rationalization Program is a LAPP, implemented in 2011, and consists of three sector-specific programs: the Shorebased IFQ Program, the MS Co-op Program, and the C/P Co-op Program. In accordance with the MSA, and based on a recommended structure and methodology developed in coordination with the Pacific Fishery Management Council (Council), NMFS began collecting mandatory fees of up to 3 percent of the ex-vessel value of groundfish from each program (Shorebased IFQ Program, MS Co-op Program, and C/P Co-op Program) in 2014. NMFS collects the fees to recover the incremental costs of management, data collection and analysis, and enforcement of the Groundfish Trawl Rationalization Program. Additional background can be found in the cost recovery proposed rule (78 FR 7371; February 1, 2013) and final rule (78 FR 75268; December 11, 2013). The details of cost recovery for the Groundfish Trawl Rationalization Program are in regulation at 50 CFR 660.115 (Trawl fishery—cost recovery program), § 660.140 (Shorebased IFQ Program), § 660.150 (MS Co-op Program), and § 660.160 (C/P Co-op Program).

By December 31 of each year, NMFS announces the next year's fee percentages and the applicable MS pricing for the C/P Co-op Program. To calculate the fee percentages, NMFS used the formula specified in regulation at § 660.115(b)(1), where the fee

percentage by sector equals the lower of 3 percent or direct program costs (DPC) for that sector divided by total ex-vessel value (V) for that sector multiplied by 100 (Fee percentage = the lower of 3 percent or (DPC/V) × 100).

'DPC,' as defined in the regulations at § 660.115(b)(1)(i), are the actual incremental costs for the previous fiscal year directly related to the management, data collection and analysis, and enforcement of each program (Shorebased IFQ Program, MS Co-op Program, and C/P Co-op Program). Actual incremental costs means those net costs that would not have been incurred but for the implementation of the Groundfish Trawl Rationalization Program, including both increased costs for new requirements of the program and reduced costs resulting from any program efficiencies or adjustments to costs from previous years.

''V'', as specified at § 660.115(b)(1)(ii), is the total ex-vessel value, as defined at § 660.111, for each sector from the previous calendar year. To determine the ex-vessel value for the Shorebased IFQ Program, NMFS used the ex-vessel value for calendar year 2019 as reported in the Pacific Fisheries Information Network (PacFIN) from Shorebased IFQ electronic fish tickets as this was the most recent complete set of data. To determine the ex-vessel value for the MS Co-op Program and the C/P Co-op Program, NMFS used the retained catch estimates (weight) for each sector as reported in the North Pacific Observer Program database multiplied by the average price of Pacific whiting as reported in PacFIN from the Shorebased IFQ sector in 2019. NMFS does not collect pricing data for these two sectors so it uses the Shorebased IFQ sector price data as a proxy.

The fee calculations for the 2021 fee percentages are described below.

IFQ Program:

- 2.5 percent = the lower of 3 percent or ($1,482,104.69/$60,388,316.00) × 100.

MS Co-op Program:

- 1.3 percent = the lower of 3 percent or ($137,542.72/$10,625,816.30) × 100.

C/P Co-op Program:

- 0.2 percent = the lower of 3 percent or ($44,255.85/$23,703,577.63) × 100.

MS Average Pricing

MS pricing is the average price per pound that the C/P Co-op Program will use to determine the fee amount due for that sector. In the absence of MS price data, NMFS calculates MS pricing using Pacific whiting price data from the Shorebased IFQ Program in PacFIN. The C/P sector value (V) is calculated by multiplying the retained catch estimates (weight) of Pacific whiting harvested by the vessel registered to a C/P-endorsed limited entry trawl permit by the MS pricing. NMFS has calculated the 2021 MS pricing to be used as a proxy by the CP Co-op Program as: $0.09/lb for Pacific whiting.

Cost recovery fees are submitted to NMFS by fish buyers via *Pay.gov* (*https://www.pay.gov/*). Fees are only accepted in *Pay.gov* by credit/debit card or bank transfers. Cash or checks cannot be accepted. Fish buyers registered with *Pay.gov* can login in the upper right-hand corner of the screen. Fish buyers not registered with *Pay.gov* can go to the cost recovery forms directly from the website below. The links to the *Pay.gov* forms for each program (IFQ, MS, or C/P) are listed below:

IFQ: *https://www.pay.gov/public/form/start/58062865;*

MS: *https://www.pay.gov/public/form/start/58378422;* and

C/P: *https://www.pay.gov/public/form/start/58102817.*

As stated in the preamble to the cost recovery proposed and final rules, in the spring of each year, NMFS will release an annual report documenting the details and data used for the fee percentage calculations. Annual reports are available at: *https://www.fisheries.noaa.gov/west-coast/sustainable-fisheries/west-coast-groundfish-trawl-catch-share-program#cost-recovery.*

Authority: 16 U.S.C. 1801 *et seq.,* 16 U.S.C.773 *et seq.,* and 16 U.S.C. 7001 *et seq.*

Dated: December 4, 2020.

Jennifer M. Wallace,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2020–27101 Filed 12–9–20; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 20–17]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense.

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at *karma.d.job.civ@mail.mil* or (703) 697–8976.

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, Transmittal 20–17 with attached Policy Justification.

Dated: December 7, 2020.

Kayyonne T. Marston,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 5001–06–P

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

OCT 0 1 2020

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam 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. 20-17 concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of Egypt for defense articles and services estimated to cost $417 million. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

Heidi H. Grant
Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Regional Balance (Classified document provided under separate cover)

BILLING CODE 5001–06–C

Transmittal No. 20–17

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 Egypt

(ii) *Total Estimated Value:*

Major Defense Equipment * ..	$ 0 million
Other	$417 million
Total	$417 million

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase*:

Major Defense Equipment (MDE):
None

Non-MDE:
A Maritime Domain Awareness (MDA) system that includes multi-site Acquisition Radars (fixed and mobile) with supporting facilities, Electro-Optical/Infrared Sensors (fixed, mobile, airborne), Radio Communications suites, Hybrid Power Generation Systems, Closed Circuit Television, Power and Data Distribution Units, Automatic Identification System, and various other surveillance and communications systems; and other related elements of logistical and program support. Equipment includes: thirty-four (34) Integrated Fixed Towers with supporting equipment; twenty-eight (28) Communication Towers with supporting equipment; twelve (12)

Relay Towers with supporting equipment; six (6) Naval Base Operations Rooms, two (2) regional Operations Centers, and one (1) Strategic Operation Center all with supporting equipment; six (6) Harbor Protection Systems with supporting equipment; Intelligent Fiber Intrusion Detection System; twelve (12) Vertical Take Off and Landing UAV with six (6) Ground Stations; fourteen (14) Mobile Maritime Surveillance Vehicles; and, three (3) Aerostat ISR Integrated Platform with supporting equipment.

(iv) *Military Department*: Navy (EG-P-LGQ)

(v) *Prior Related Cases, if any*: EG-D-DAB

(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*: October 1, 2020

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Egypt—Maritime Domain Awareness System

The Government of Egypt has requested a possible sale of a Maritime Domain Awareness (MDA) system that includes multi-site Acquisition Radars (fixed and mobile) with supporting facilities, ElectroOptical/Infrared Sensors (fixed, mobile, airborne), Radio Communications suites, Hybrid Power Generation Systems, Closed Circuit Television, Power and Data Distribution Units, Automatic Identification System, and various other surveillance and communications systems; and other related elements of logistical and program support. Equipment includes: thirty-four (34) Integrated Fixed Towers with supporting equipment; twenty-eight (28) Communication Towers with supporting equipment; twelve (12) Relay Towers with supporting equipment; six (6) Naval Base Operations Rooms, two (2) regional Operations Centers, and one (1) Strategic Operation Center all with supporting equipment; six (6) Harbor Protection Systems with supporting equipment; Intelligent Fiber Intrusion Detection System; twelve (12) Vertical Take Off and Landing UAV with six (6) Ground Stations; fourteen (14) Mobile Maritime Surveillance Vehicles; and, three (3) Aerostat ISR Integrated Platform with supporting equipment. The estimated total program cost is $417 million.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of a Major Non-NATO Ally country that continues to be an important strategic partner in the Middle East.

Egypt intends to use this Maritime Domain Awareness system to provide the Egyptian Armed Forces with a maritime surveillance capability with real-time situational awareness in the defense of Egypt maritime boundary, natural resources, and ports. Egypt 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 prime contractor will be the Advanced Technology Systems Company (ATSC), McLean, VA. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require annual trips to Egypt involving U.S. Government and contractor representatives for technical reviews, support, and oversight for approximately five years.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2020–27188 Filed 12–9–20; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 20–60]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense.

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at *karma.d.job.civ@mail.mil* or (703) 697–8976.

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, Transmittal 20–60 with attached Policy Justification and Sensitivity of Technology.

Dated: December 7, 2020.

Kayyonne T. Marston,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 5001–06–P

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

October 1, 2020

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam 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. 20-60 concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Republic of Korea for defense articles and services estimated to cost $158.1 million. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

Heidi H. Grant
Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

BILLING CODE 5001–06–C

Transmittal No. 20–60

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*: Republic of Korea

(ii) *Total Estimated Value*:

Major Defense Equipment *	$135.9 million
Other	$ 22.2 million
Total	$158.1 million

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase*:

Major Defense Equipment (MDE):
One hundred fifteen (115) AIM-9X Block II Tactical Sidewinder Missiles
Fifty (50) AIM-9X Block II Captive Air Training Missiles (CATM)
Twenty (20) AIM-9X Block II Tactical Missile Guidance Units
Twenty (20) AIM-9X Block II CATM Guidance Units

Non-MDE:
Also included are containers, weapon system support, software, surface transportation, missile technical assistance, and other technical assistance; and other related elements of program support.

(iv) *Military Department*: Navy (KS-P-AMV)

(v) *Prior Related Cases, if any*: KS-P-ALE

(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*: **October 1, 2020**

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Korea—AIM-9X Block II Tactical Sidewinder Missiles

The Republic of Korea has requested to buy one hundred fifteen (115) AIM-9X Block II Tactical Sidewinder missiles; fifty (50) AIM-9X Block II Captive Air Training Missiles (CATM); twenty (20) AIM-9X Block II Tactical Missile Guidance Units; and twenty (20) AIM-9X Block II CATM Guidance Units. Also included are containers, weapon system support, software, surface transportation, missile technical assistance, and other technical assistance; and other related elements of program support. The estimated total cost is $158.1 million.

This proposed sale will support the foreign policy goals and national security objectives of the United States by helping to improve the security of a treaty ally that continues to be an important force for political stability, peace, and economic progress in North East Asia.

The proposed sale will assist the Republic of Korea in developing and maintaining a strong and ready self-defense capability. The Republic of Korea will have no difficulty absorbing these missiles 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 Corporation, Tucson, AZ. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will not require the assignment of any additional U.S. Government or contractor representatives to the Republic of Korea.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 20–60

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 AIM-9X Block II SIDEWINDER Missile is a short-range, air-to-air missile. The AIM-9X Block II SIDEWINDER Missile provides a high off-boresight seeker, enhanced countermeasure rejection capability, low drag/high angle of attack airframe and the ability to integrate the Helmet Mounted Cueing System. The software algorithms are the most sensitive portion of the AIM-9X missile. The software continues to be modified via a pre-planned product improvement (P^3I) program in order to improve its counter-countermeasure capabilities. No software source code or algorithms will be released.

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 the Republic of Korea 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 Republic of Korea.

[FR Doc. 2020–27185 Filed 12–9–20; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 20–25]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense.

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at *karma.d.job.civ@mail.mil* or (703) 697–8976.

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, Transmittal 20–25 with attached Policy Justification and Sensitivity of Technology.

Dated: December 7, 2020.

Kayyonne T. Marston,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 5001–06–P

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

October 30, 2020

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam 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. 20-25 concerning the Army's proposed Letter(s) of Offer and Acceptance to the Government of Guyana for defense articles and services estimated to cost $256 million. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

Heidi H. Grant
Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

BILLING CODE 5001–06–C

Transmittal No. 20–25

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 Guyana

(ii) *Total Estimated Value*:

Major Defense Equipment *	$ 0 million
Other	$256 million
Total	$256 million

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase*:

Major Defense Equipment (MDE):
None

Non-MDE:
Two (2) Bell 412EPi Light Utility Helicopters with customer-unique modifications; two (2) Bell 429 Light Utility Helicopters with customer-unique modifications; two (2) WESCAM MX-10 cameras; mission equipment; contractor-provided pilot and maintainer training; particular ground support equipment; spares; publications; integrated product support; technical assistance; transportation; Repair and Return; and other related elements of logistics and program support.

(iv) *Military Department*: Army (GU-B-UAH)

(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*: **October 30, 2020**

* As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Guyana—Bell 412EPi and 429 Helicopters

The Government of Guyana has requested to buy two (2) Bell 412EPi Light Utility Helicopters with customer-unique modifications; two (2) Bell 429 Light Utility Helicopters with customer-unique modifications; two (2) WESCAM MX-10 cameras; mission equipment; contractor-provided pilot and maintainer training; particular ground support equipment; spares; publications; integrated product support; technical assistance; transportation; Repair and Return; and other related elements of logistics and program support. The total estimated program cost is $256 million.

This proposed sale will support the foreign policy and national security of the United States by helping to improve security of Guyana, which is expected to grow to be an important force for political stability and economic progress in South America.

The proposed sale of the Bell 412EPi and 429 helicopters will improve Guyana's capability to meet current and future threats. Guyana will use the enhanced capability to strengthen its homeland defense; conduct maritime surveillance, patrol, and interdiction; counter narcotic trafficking and transnational criminal organizations; deter regional threats; and support coalition partners overseas. Guyana 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 Bell Helicopter Textron Incorporated (BHTI), Piney Flats, TN. The purchaser typically requests offsets. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this sale will not require the assignment of any additional U.S. Government or contractor representatives to Guyana.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 20-25

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 Bell 412EPi is a twin-engine, 1 + 14 passenger capacity, newly manufactured utility helicopter with IFR Medium Twin (3-Axis) with Bell BASIX-PRO Integrated Avionics System and Pratt & Whitney PT6T-9 Engine TwinPac with Electronic Engine Controls (EEC/FADEC). The Bell BASIX-PRO Integrated Avionics Systems includes Multi-Functional Electronic Flight Instrument System (EFIS) 6‴ X 8′ LED PFD/MFD Displays (EICAS, PIS, SYS Diag., HSI, VOR, GPS, ADF, Speed, Alt, TAS, Video FDM) – Pilot and Copilot (4 per ship), IFR FAA Kit, AFCS/Dual Digital Flight Director Nav Coupler (3 – Axis) with Stability Augmentation System (SAS), Attitude Retention (ATT), NAVl/COM1/VHF/GPSl/VOR/ILS/LOC/GS/WAAS Garmin GTN-750, 16 Watt with Regional Map Database, Radar Altimeter #1 (KRA-405B), Distance Measuring Equipment, DME (KDM-706A), Automatic Direction Finder (ADF) – (KDF-806), Air Data Computer (ADC), Altitude & Heading Reference System (LCR-100). The Bell 412EPi is in the Search and Rescue (SAR) with Automatic Flight Control System (AFCS) configuration. The SAR system is composed of a navigation computer with SAR modes, and AFCS that provides coupled SAR functions, hoist operator control, a hover speed reference system, and two radio altimeters. This aircraft (before modification) is generally offered to the public with no special restrictions.

2. The Bell 429 is a light twin, newly manufactured helicopter. The Bell 429 features two/three multi-function displays, dual digital 3-axis autopilot and an integrated electronic data recorder provides enhanced situational awareness and post flight analysis. The Bell 429 standard configuration consists of Dual Pilot Control Provisions, Radar Altimeter (Honeywell KRA 4058, GPS GTN 750 HT A WS upgrade), Traffic Avoidance System – TAS605 with Mutable Audio (Avidyne), NAV/COM/GPS – GTN-750 ChartView Upgrade, Weather Radar (Honeywell ART/RDR-2000) Original Radome (Displayed on GTN-750). This aircraft (before modification) is generally offered to the public with no special restrictions.

3. The U.S. Government will provide modified aircraft that are globally self-deployable and appropriately equipped to be able to meet the communications, navigation, surveillance and Air Traffic Management (CNS/ATM) requirements for unrestricted transit through domestic and International Civil Aviation Organization (ICAO) civilian-controlled and military-controlled airspace.

4. The WESCAM MX-10 is a small Multi-Sensor, Multi-Spectral Imaging System with Inertial Measurement Unit (IMU) and Embedded with Global Positioning System (GPS) Standard Positioning Service (SPS). The WESCAM MX-10 camera system contains a HG-1900BA50 IMU manufactured by Honeywell in the United States. WESCAM MX-10 is embedded with GPS SPS. SPS is a three-dimensional position and time determination capability provided to a user equipped with a minimum capability GPS SPS receiver in accordance with GPS national policy. The HG-1900BA50 includes Micro-Electro Mechanical Systems (MEMS) gyros and quartz resonating beam accelerometers and is an MTCR Category II controlled item, specifically 9.A.6..

5. If a technologically advanced adversary were to obtain knowledge of the hardware and software elements, the information could be used to develop countermeasures or equivalent systems which might reduce system effectiveness or be used in the development of a system with similar or advanced capabilities.

6. A determination has been made that Guyana can provide substantially the same degree of protection for the technology being released as the U.S. Government. This potential sale is necessary in furtherance of the U.S. foreign policy and national security objectives as outlined in the Policy Justification.

7. All defense articles and services listed in this transmittal are authorized for release and export to the Government of Guyana.

[FR Doc. 2020–27187 Filed 12–9–20; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2020–SCC–0186]

Agency Information Collection Activities; Comment Request; Survey on Use of Funds Under Title II, Part A

AGENCY: Office of Elementary and Secondary Education, Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing a new information collection.

DATES: Interested persons are invited to submit comments on or before February 8, 2021.

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–2020–SCC–0186. 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 *regulations.gov* site is not available to the public for any reason, ED 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 by fax or email and those 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 PRA Coordinator of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W208B, Washington, DC 20202–8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Andrew Brake, 202–453–6136.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), 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. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education 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: Survey on Use of Funds Under Title II, Part A.

OMB Control Number: 1810–NEW.

Type of Review: A new information collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 52.

Total Estimated Number of Annual Burden Hours: 312.

Abstract: The U.S. Department of Education (the Department) is requesting clearance to continue collecting data from states annually about how Title II, Part A funds are used; how funds are used to improve equitable access to teachers for-low income and minority students; and where applicable, evaluation and retention data for teachers, principals, and other school leaders. The reporting requirements are outlined in Section 2104(a) of the Elementary and Secondary Education Act (ESEA), as authorized by the Every Student Succeeds Act of 2015 (ESSA).

The survey will include the universe of states, the District of Columbia, and Puerto Rico. The information obtained from the survey will provide the Department with a description of how Title II, Part A State activities funds are used by teach State. In addition, the survey will provide data on teacher, principal, and other school leader evaluation and retention. The survey will be sent to State Title II, Part A coordinators in each of the 50 states, District of Columbia, and Puerto Rico. The survey will be administered using an electronic instrument.

Dated: December 7, 2020.

Stephanie Valentine,

PRA Coordinator, Strategic Collections and Clearance Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2020–27152 Filed 12–9–20; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2020–SCC–0187]

Agency Information Collection Activities; Comment Request; Case Service Report (RSA–911)

AGENCY: Office of Special Education and Rehabilitation Services (OSERS), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing an extension without change of a currently approved collection.

DATES: Interested persons are invited to submit comments on or before February 8, 2021.

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–2020–SCC–0187. 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 *regulations.gov* site is not available to the public for any reason, ED 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 by fax or email and those 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 PRA Coordinator of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W208D, Washington, DC 20202–8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Christopher Pope, 202–245–7375.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), 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. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education 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: Case Service Report (RSA–911).

OMB Control Number: 1820–0508.

Type of Review: An extension without change of a currently approved collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 312.

Total Estimated Number of Annual Burden Hours: 34,446.

Abstract: The Case Service Report (RSA–911) is used to collect individual level data on State Vocational Rehabilitation (VR) program participants on a quarterly basis. The data collected in this report are mandated by section 101(a)(10) and 607 of the Rehabilitation Act of 1973 (Act), as amended by title IV of the Workforce Innovation and Opportunity Act (WIOA) and section 116(d) of WIOA. In addition, the Rehabilitation Services Administration (RSA) uses data reported through this collection to support its other responsibilities under the Act. Section 14(a) of the Act calls for the evaluation of programs authorized under the Act, as well as an assessment of the programs' effectiveness in relation to cost. Many of these evaluations use RSA–911 data. RSA also uses data captured through the RSA–911 during the conduct of both the annual review and periodic on-site monitoring of VR agencies required by section 107 of the Act to examine the effectiveness of program performance. Other important management activities, such as the provision of technical assistance, program planning, and budget preparation and development, are greatly enhanced through the use of RSA–911 data. In addition, RSA uses RSA–911 data in the exchange of data under a data sharing agreement with the Social Security Administration and the U.S. Department of Health and Human Services as required by section 131 of the Act. Finally, the RSA–911 is considered to be one of the most robust databases in describing the demographics of the disabled population in the country and as such is used widely in researchers' disability-related analyses and reports.

Dated: December 7, 2020.

Kate 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. 2020–27169 Filed 12–9–20; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2020–SCC–0185]

Agency Information Collection Activities; Comment Request; College Affordability and Transparency Explanation Form (CATEF) 2021–2023

AGENCY: Office of Postsecondary Education (OPE), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing an extension without change of a currently approved collection.

DATES: Interested persons are invited to submit comments on or before February 8, 2021.

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–2020–SCC–0185. 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 *regulations.gov* site is not available to the public for any reason, ED 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 by fax or email and those 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 PRA Coordinator of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W208D, Washington, DC 20202–8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Freddie Cross, 202–453–7224.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), 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. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education 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: College Affordability and Transparency Explanation Form (CATEF) 2021–2023.

OMB Control Number: 1840–0822.

Type of Review: An extension without change of a currently approved collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 544.

Total Estimated Number of Annual Burden Hours: 1,251.

Abstract: The Office of Postsecondary Education (OPE) is seeking a renewed three-year clearance for the College Affordability and Transparency Explanation Form (CATEF) data collection. OPE has collected this information since 2011–12 and the collection of information through CATEF is required by § 132 of the Higher Education Act of 1965 as amended (HEA), 20 U.S.C. 1015a with

the goal of increasing the transparency of college tuition prices for consumers. This submission is for the 2021–22, 2022–23, and 2023–24 collection years. CATEF collects follow-up information from institutions that appear on the tuition and fees and/or net price increase College Affordability and Transparency Center (CATC) Lists for being in the five percent of institutions in their institutional sector that have the highest increases, expressed as a percentage change, over the three-year time period for which the most recent data are available. The information collected through CATEF is used to write a summary report for Congress which is also posted on the CATC website (accessible through the College Navigator).

Dated: December 7, 2020.

Kate 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. 2020–27141 Filed 12–9–20; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2020–SCC–0184]

Notice of Revision to the National Assessment of Educational Progress Survey by Suspending Data Collection for 2021

AGENCY: National Center for Education Statistics (NCES), Department of Education (ED).

ACTION: Notice of change to data collection.

SUMMARY: This notice announces the intention of the National Center for Education Statistics (NCES) not to collect student assessment data for the currently approved information collection, the National Assessment of Educational Progress, originally planned for January–March 2021.

DATES: Interested persons are invited to submit comments on or before January 11, 2021.

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–2020–SCC–0184. 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 *regulations.gov* site is not available to the public for any reason, ED 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 by fax or email and those 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 Director of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W208B, Washington, DC 20202–8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact James L. Woodworth, Commissioner, National Center for Education Statistics, or email *NCES.Information.Collections@ed.gov.*

SUPPLEMENTARY INFORMATION: The Department of Education (ED), 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. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education 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: National Assessment of Educational Progress.

OMB Control Number: 1850–NEW (relates to 1850–0928).

Type of Request: To suspend a portion of a currently approved information collection.

Abstract: The National Assessment of Educational Progress (NAEP), conducted by the National Center for Education Statistics (NCES), is a federally authorized survey of student achievement at grades 4, 8, and 12 in various subject areas, such as mathematics, reading, writing, science, U.S. history, civics, geography, economics, technology and engineering literacy (TEL), and the arts. It requires fair and accurate presentation of achievement data and permits the collection of background, noncognitive, or descriptive information that is related to academic achievement and aids in fair reporting of results. The intent of the law is to provide representative sample data on student achievement for the nation, the states, and subpopulations of students and to monitor progress over time.

NCES has determined that it cannot at this time conduct a national-level assessment (20 U.S.C. 9622(b)(2)(A)) in a manner with sufficient validity and reliability to meet the mandate of the law due to school closures resulting from the ongoing coronavirus pandemic. The NAEP assessments are a key indicator of educational progress in the United States with trends going back decades. The change in operations and lack of access to students to be assessed means that NAEP will not be able to produce estimates of what students know and can do that would be comparable to either past or future national or state estimates. Therefore, NCES will not be collecting student assessment data in January through March 2021 as originally planned. NCES will continue to provide public updates on any further changes to the NAEP assessments through our NAEP COVID–19 Planning and Resources web page, found here: *https://nces.ed.gov/nationsreportcard/about/covid19.aspx.*

Authority: The National Assessment of Educational Progress Authorization Act (Pub. L. 107–279 Title III, section 303) requires the assessment to collect data on specified student groups and characteristics, including information organized by race/ethnicity, gender, socio-economic status, disability, and limited English proficiency.

Estimate of Burden: There will be no further public reporting burden for this collection of information.

Dated: December 7, 2020.

Stephanie Valentine,

PRA Coordinator, Strategic Collections and Clearance Governance and Strategy Division Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2020–27153 Filed 12–9–20; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 3511–024]

Notice of Application Accepted for Filing and Soliciting Motions To Intervene and Protests; Lower Saranac Hydro, LLC

Take notice that the following hydroelectric application has been filed with the Commission and is available for public inspection.

a. *Type of Application:* Subsequent Minor License.

b. *Project No.:* 3511–024.

c. *Date filed:* May 29, 2020.

d. *Applicant:* Lower Saranac Hydro, LLC.

e. *Name of Project:* Groveville Hydroelectric Project.

f. *Location:* On Fishkill Creek, in the City of Beacon, Dutchess County, New York. The project does not occupy any federal land.

g. *Filed Pursuant to:* Federal Power Act, 16 U.S.C. 791 (a)–825(r).

h. *Applicant Contact:* Ms. Elise Anderson, Senior Environmental Permitting Specialist, Lower Saranac Hydro, LLC, Enel Green Power North America, Inc., 100 Brickstone Square, Suite 300, Andover, MA 01810; Phone: (978) 447–4408 or email at *elise.anderson@enel.com.*

i. *FERC Contact:* Jeremy Feinberg at (202) 502–6893 or *jeremy.feinberg@ferc.gov.*

j. *Deadline for filing motions to intervene and protests:* February 2, 2021.

The Commission strongly encourages electronic filing. Please file motions to intervene and protests using the Commission's eFiling system at *https://ferconline.ferc.gov/FERCOnline.aspx.* 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: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

The Commission's Rules of Practice require all intervenors filing documents with the Commission to serve a copy of that document on each person on the official service list for the project. Further, if an intervenor files comments or documents with the Commission relating to the merits of an issue that may affect the responsibilities of a particular resource agency, they must also serve a copy of the document on that resource agency.

k. This application has been accepted but is not ready for environmental analysis at this time.

l. *The Groveville Hydroelectric Project consists of:* (1) A 167-foot-long, 37-foot-high concrete gravity dam, with a 140-foot-long spillway having a crest elevation of 172.4 feet National Geodetic Vertical Datum of 1929 (NGVD29) and topped with 3-foot-high wooden flashboards; (2) an impoundment with a gross storage capacity of approximately 43 acre-feet and a surface area of 5 acres at a normal pool elevation of 175.4 feet NGVD29; (3) an intake structure with two gates and a 27-foot-high, 34-foot-wide trashrack; (4) a 9-foot-diameter, approximately 140-foot-long riveted steel underground penstock; (5) a powerhouse containing three fixed-output turbine-generator units with a total rated capacity of 927 kilowatts; (6) a 4-foot-high submerged stilling basin weir approximately 60 feet downstream of the dam spillway; (7) a 20-foot-wide, 90-foot-long tailrace; (8) a 20-foot-long underground generator lead connecting to a step-up transformer that connects to a 13.2-kilovolt, 40-foot-long underground transmission line that then connects to a 15-foot-long aerial transmission line before connecting to the regional grid; and (9) appurtenant facilities.

The project operates in a modified run-of-river mode. The project had an average annual generation of 1,762.7 megawatt-hours between 2012 and 2019.

m. A copy of the application is available for review 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 FERC Online Support.

You may also register online at *http://www.ferc.gov/esubscription.aspx* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

n. Anyone may submit a protest or a motion to intervene in accordance with the requirements of Rules of Practice and Procedure, 18 CFR 385.210, 385.211, and 385.214. In determining the appropriate action to take, the Commission will consider all protests filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any protests or motions to intervene must be received on or before the specified deadline date for the particular application.

All filings must (1) bear in all capital letters the title ''PROTEST'' or ''MOTION TO INTERVENE;'' (2) set forth in the heading the name of the applicant and the project number of the application to which the filing responds; (3) furnish the name, address, and telephone number of the person protesting or intervening; and (4) otherwise comply with the requirements of 18 CFR 385.2001 through 385.2005. Agencies may obtain copies of the application directly from the applicant. A copy of any protest or motion to intervene must be served upon each representative of the applicant specified in the particular application.

o. *Procedural schedule:* The application will be processed according to the following preliminary Hydro Licensing Schedule. Revisions to the schedule will be made as appropriate.

Issue Scoping Document 1 for comments: February 2021

Request Additional Information (if necessary): April 2021

Issue Scoping Document 2 (if necessary): May 2021

Issue Notice of Ready for Environmental Analysis: May 2021

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27128 Filed 12–9–20; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ID–7120–005]

Notice of Filing; Flynn, John J.

Take notice that on December 3, 2020, John J. Flynn 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) (2020) and Part 45 of the Federal Energy Regulatory Commission's (Commission) Rules of Practice and Procedure, 18 CFR part 45.8 (2020).

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://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 TYY, (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.

Comment Date: 5:00 p.m. Eastern Time on December 24, 2020.

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27129 Filed 12–9–20; 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 rate filings:

Docket Numbers: ER10–2732–019; ER10–2733–019; ER10–2734–019; ER10–2736–019; ER10–2737–019; ER10–2741–019; ER10–2749–020; ER10–2752–019; ER12–2492–015; ER12–2493–015; ER12–2494–015; ER12–2495–015; ER12–2496–015; ER16–2455–009; ER16–2456–009; ER16–2457–009; ER16–2459–009; ER18–1404–005; ER19–2096–002.

Applicants: Emera Energy Services, Inc., Emera Energy LNG, LLC, Emera Energy Services Subsidiary No. 1 LLC, Emera Energy Services Subsidiary No. 2 LLC, Emera Energy Services Subsidiary No. 3 LLC, Emera Energy Services Subsidiary No. 4 LLC, Emera Energy Services Subsidiary No. 5 LLC, Emera Energy Services Subsidiary No. 6 LLC, Emera Energy Services Subsidiary No. 7 LLC, Emera Energy Services Subsidiary No. 8 LLC, Emera Energy Services Subsidiary No. 9 LLC, Emera Energy Services Subsidiary No. 10 LLC, Emera Energy Services Subsidiary No. 11 LLC, Emera Energy Services Subsidiary No. 12 LLC, Emera Energy Services Subsidiary No. 13 LLC, Emera Energy Services Subsidiary No. 15 LLC, Emera Energy U.S. Subsidiary No. 1, Inc., Emera Energy U.S. Subsidiary No. 2, Inc., NS Power Energy Marketing Inc.

Description: Triennial Market Power Update for Southeast Region of the Emera Entities.

Filed Date: 12/3/20.

Accession Number: 20201203–5147.

Comments Due: 5 p.m. ET 2/1/20.

Docket Numbers: ER20–3025–001.

Applicants: GridLiance High Plains LLC.

Description: Tariff Amendment: GridLiance High Plains LLC Deficiency Filing ER20–3025 to be effective 11/29/2020.

Filed Date: 12/4/20.

Accession Number: 20201204–5133.

Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–292–001.

Applicants: Oakland Power Company LLC.

Description: Tariff Amendment: Deferral of Commission Action to Permit Ongoing Settlement Discussions to be effective 12/31/9998.

Filed Date: 12/4/20.

Accession Number: 20201204–5118.

Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–562–000.

Applicants: Leaf River Cellulose, LLC.

Description: Tariff Cancellation: Notice of Electric Tariff Cancellation to be effective 12/31/2020.

Filed Date: 12/3/20.

Accession Number: 20201203–5135.

Comments Due: 5 p.m. ET 12/24/20.

Docket Numbers: ER21–563–000.

Applicants: Georgia-Pacific Consumer Operations LLC, Savannah.

Description: Tariff Cancellation: Notice of Electric Tariff Cancellation to be effective 12/31/2020.

Filed Date: 12/3/20.

Accession Number: 20201203–5137.

Comments Due: 5 p.m. ET 12/24/20.

Docket Numbers: ER21–564–000.

Applicants: Mid-Atlantic Interstate Transmission, LLC, PJM Interconnection, L.L.C.

Description: § 205(d) Rate Filing: MAIT submits Two ECSAs, SA Nos. 5778 and 5779 to be effective 2/2/2021.

Filed Date: 12/3/20.

Accession Number: 20201203–5141.

Comments Due: 5 p.m. ET 12/24/20.

Docket Numbers: ER21–565–000.

Applicants: Duke Energy Carolinas, LLC.

Description: § 205(d) Rate Filing: DEC–PMPA NITSA SA 355 to be effective 1/1/2021.

Filed Date: 12/3/20.

Accession Number: 20201203–5150.

Comments Due: 5 p.m. ET 12/24/20.

Docket Numbers: ER21–566–000.

Applicants: NorthWestern Corporation.

Description: § 205(d) Rate Filing: SA 902—NITSA with Montana State University to be effective 1/1/2021.

Filed Date: 12/4/20.

Accession Number: 20201204–5000.

Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–567–000.

Applicants: Northern Indiana Public Service Company LLC.

Description: § 205(d) Rate Filing: Filing of a CIAC Agreement to be effective 12/5/2020.

Filed Date: 12/4/20.

Accession Number: 20201204–5041.

Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–568–000.

Applicants: Lanyard Power Holdings, LLC.
Description: § 205(d) Rate Filing: Lanyard Power Holdings, LLC Notice of Succession to be effective 11/13/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5044.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–569–000.
Applicants: Northern Indiana Public Service Company LLC.
Description: § 205(d) Rate Filing: Filing of a CIAC Agreement to be effective 12/5/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5045.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–570–000.
Applicants: Northern Indiana Public Service Company LLC.
Description: § 205(d) Rate Filing: Filing of a CIAC Agreement to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5046.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–571–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Amendment to WMPA, Service Agreement No. 4766; Queue No. AB1–124 to be effective 8/7/2017.
Filed Date: 12/4/20.
Accession Number: 20201204–5057.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–572–000.
Applicants: Southern California Edison Company.
Description: § 205(d) Rate Filing: GIA & DSA Mammoth-Pacific, L.P. SA Nos. 1128–1129 to be effective 12/7/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5067.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–573–000.
Applicants: Chalk Point Power, LLC.
Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5089.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–574–000.
Applicants: Dickerson Power, LLC.
Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5090.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–575–000.
Applicants: Lanyard Power Marketing, LLC.
Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5094.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–576–000.
Applicants: Southern California Edison Company.
Description: § 205(d) Rate Filing: Letter Agreement SEGS Expansion Hybrid Project SA No. 259 to be effective 12/5/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5095.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–577–000.
Applicants: Morgantown Power, LLC.
Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5092.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–578–000.
Applicants: Morgantown Station, LLC.
Description: Baseline eTariff Filing: Application for Market-Based Rate Authorization to be effective 2/3/2021.
Filed Date: 12/4/20.
Accession Number: 20201204–5093.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–579–000.
Applicants: Lanyard Power Holdings, LLC.
Description: Tariff Cancellation: Notice of Cancellation of Tariffs to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5110.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–580–000.
Applicants: Basin Electric Power Cooperative.
Description: § 205(d) Rate Filing: Basin Electric Amendment to Service Agreement No. 103 to be effective 10/29/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5111.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–581–000.
Applicants: Morgantown Station, LLC.
Description: § 205(d) Rate Filing: Proposed Morgantown Station Reactive Supply Service Tariff to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5112.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–582–000.
Applicants: Morgantown Power, LLC.
Description: § 205(d) Rate Filing: Proposed Morgantown Power Reactive Supply Service Tariff to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5113.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–583–000.
Applicants: Dickerson Power, LLC.
Description: § 205(d) Rate Filing: Proposed Dickerson Power Reactive Supply Service Tariff to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5114.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–584–000.
Applicants: Chalk Point Power, LLC.
Description: § 205(d) Rate Filing: Proposed Chalk Point Power Reactive Supply Service Tariff to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5117.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–585–000.
Applicants: Chalk Point Steam, LLC.
Description: § 205(d) Rate Filing: Proposed Chalk Point Steam Reactive Supply Service Tariff to be effective 12/31/9998.
Filed Date: 12/4/20.
Accession Number: 20201204–5119.
Comments Due: 5 p.m. ET 12/28/20.

Docket Numbers: ER21–586–000.
Applicants: PJM Interconnection, L.L.C.
Description: Tariff Cancellation: Notice of Cancellation of WMPA, SA No. 5295; Queue No. AB1–137 re: breach to be effective 11/30/2020.
Filed Date: 12/4/20.
Accession Number: 20201204–5132.
Comments Due: 5 p.m. ET 12/28/20.

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 or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) 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.

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27130 Filed 12–9–20; 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:

Docket Numbers: RP21–294–000.
Applicants: Eastern Gas Transmission and Storage, Inc.
Description: § 4(d) Rate Filing: Eastern GTS—Baseline Filing of FERC Gas Tariff, Volume Nos. 1, 1B, and 2 to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5006.
Comments Due: 5 p.m. ET 12/15/20.

Docket Numbers: RP21–295–000.
Applicants: Eastern Gas Transmission and Storage, Inc.
Description: Tariff Cancellation: EGTS—Cancellation of FERC Gas Tariff, Volume Nos, 1, 1B and 2 to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5030.
Comments Due: 5 p.m. ET 12/15/20.

Docket Numbers: RP21–296–000.
Applicants: Cove Point LNG, LP.
Description: § 4(d) Rate Filing: Cove Point—Baseline Filing of FERC Gas Tariff to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5039.
Comments Due: 5 p.m. ET 12/15/20.

Docket Numbers: RP21–297–000.
Applicants: Carolina Gas Transmission, LLC.
Description: § 4(d) Rate Filing: CGT—Baseline Filing of FERC Gas Tariff to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5041.
Comments Due: 5 p.m. ET 12/15/20.

Docket Numbers: RP21–298–000.
Applicants: Cove Point LNG, LP.
Description: Tariff Cancellation: Cove Point—Cancellation of FERC Gas Tariff to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5057.
Comments Due: 5 p.m. ET 12/15/20.

Docket Numbers: RP21–299–000.
Applicants: Carolina Gas Transmission, LLC.
Description: Tariff Cancellation: Carolina Gas—Cancellation of FERC Gas Tariff to be effective 12/3/2020.
Filed Date: 12/3/20.
Accession Number: 20201203–5061.
Comments Due: 5 p.m. ET 12/15/20.

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 or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) 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.

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27131 Filed 12–9–20; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. NJ21–3–000]

Notice of Filing; City of Anaheim, California

Take notice that on November 19, 2020, the City of Anaheim, California submitted its tariff filing: City of Anaheim 2021 TRBAA Update to be effective 1/1/2021.

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://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 TYY, (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.

Comment Date: 5:00 p.m. Eastern Time on December 18, 2020.

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27127 Filed 12–9–20; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Notice Concerning All Permitted Hard Copy Submissions

As a result of onsite personnel recently being exposed to a positive COVID–19 case, the Commission is temporarily delaying the processing of all permitted hard copy submissions to the Commission's Headquarters at 888 First Street NE, Washington, DC 20426. Permitted hard copy filings will be processed after clearance has been given for relevant staff to re-enter the Commission's Headquarters. Accepted hard copy filings will be given the date that the filing was received by the Commission as the ''File Date.'' This notice will remain in effect for 7 days from the date of its issuance and may be renewed at the conclusion of this period.

This notice does not change the process for submitting electronic filings with the Commission. The public is strongly encouraged to continue to submit filings and submissions electronically, through the Commission's eFiling application, at *https://www.ferc.gov/.* More detailed

information relating to electronic filing requirements can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For assistance with filing electronically, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (886) 208–3676 or TYY, (202) 502–8659.

Dated: December 4, 2020.

Kimberly D. Bose,

Secretary.

[FR Doc. 2020–27132 Filed 12–9–20; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OW–2020–0673; FRL–10018–43–OW]

Applying the Supreme Court's County of Maui v. Hawaii Wildlife Fund Decision in the Clean Water Act Section 402 National Pollutant Discharge Elimination System Permit Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability of draft guidance and request for comment.

SUMMARY: The Environmental Protection Agency (EPA) is issuing a draft memorandum to provide guidance to the regulated community and permitting authorities on applying the recent decision of the United States Supreme Court in *County of Maui* v. *Hawaii Wildlife Fund,* 140 S. Ct. 1462 (2020), in the Clean Water Act Section 402 National Pollutant Discharge Elimination System (NPDES) permit program for point source discharges that travel through groundwater before reaching waters of the United States. Consistent with *EPA Guidance; Administrative Procedures for Issuance and Public Petitions,* published in the **Federal Register** on October 19, 2020, EPA is soliciting public comments on the draft memorandum for thirty days. The Agency may pursue a future rulemaking action to provide greater regulatory certainty concerning discharges subject to the NPDES permit program. This draft guidance document does not have the force and effect of law and it does not bind the public in any way. By issuing this draft guidance memorandum, the Agency intends only to provide clarity to the public regarding existing requirements under the law or Agency policies.

DATES: Comments must be received on or before January 11, 2021.

ADDRESSES: You may submit comments, identified by Docket ID No. EPA–HQ–OW–2020–0673, at *https://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *regulations.gov.* EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) 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, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www2.epa.gov/dockets/commenting-epadockets.*

Due to the public health concerns related to COVID–19, the EPA Docket Center (EPA/DC) and Reading Room is closed to visitors with limited exceptions. The staff continues to provide remote customer service via email and telephone. For the latest status information on EPA/DC services and docket access, visit *https://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Scott Wilson, Office of Wastewater Management, Water Permits Division (MC4203M), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: (202) 564–6087; email address: *wilson.js@epa.gov.*

A. How can I get copies of this document and other related information?

You may access this document electronically at *https://www.epa.gov/npdes/releases-point-source-groundwater* or at *https://www.federalregister.gov.* EPA has established an official public docket for receiving comments under Docket ID No. EPA–HQ–OW–2020–0673 which is accessible electronically at *http://www.regulations.gov* that will also contain copies of this **Federal Register** notice. The public docket does not include CBI or other information whose disclosure is restricted by statute. The telephone number for the Water Docket is (202) 566–2426.

Dated: December 4, 2020.

David P. Ross,

Assistant Administrator, Office of Water.

[FR Doc. 2020–27121 Filed 12–9–20; 8:45 am]

BILLING CODE 6560–50–P

FARM CREDIT ADMINISTRATION

Meeting Notice-Regular Board Meeting—December 10, 2020; Correction

AGENCY: Farm Credit Administration.

ACTION: Notice, regular meeting; correction.

SUMMARY: On December 2, 2020, the Farm Credit Administration (FCA) published a Notice, Regular Meeting for December 10, 2020.

In that publication, Tab 4 on ''Extension of No Action Until Investment Eligibility Rule's Effective Date'' was published. On December 4, 2020, a notational vote was approved by the Board to remove Tab 4 on ''Extension of No Action Until Investment Eligibility Rule's Effective Date'' from the agenda. This document corrects that error.

DATES: This correction is effective December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Dale Aultman, Secretary to the Board, Farm Credit Administration, 703) 883–4381, Farm Credit Administration, 1501 Farm Credit Drive, McLean, VA 22102–5090.

Dated: December 7, 2020.

Dale Aultman,

Secretary, Farm Credit Administration Board.

[FR Doc. 2020–27135 Filed 12–9–20; 8:45 am]

BILLING CODE 6705–01–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice to All Interested Parties of Intent to Terminate Receiverships

Notice is Hereby Given that the Federal Deposit Insurance Corporation (FDIC or Receiver), as Receiver for the institutions listed below, intends to terminate its receivership for said institutions.

NOTICE OF INTENT TO TERMINATE RECEIVERSHIPS

Fund	Receivership name	City	State	Date of appointment of receiver
10311 ..	Copper Star Bank	Scottsdale	AZ	11/12/2010
10313 ..	Tifton Banking Company	Tifton	GA	11/12/2010
10319 ..	Appalachian Community Bank	McCaysville	GA	12/17/2010
10353 ..	Bartow County Bank	Cartersville	GA	04/15/2011
10371 ..	McIntosh State Bank	Jackson	GA	06/17/2011
10377 ..	High Trust Bank	Stockbridge	GA	07/15/2011
10426 ..	Central Bank of Georgia	Ellaville	GA	02/24/2012
10476 ..	Douglas County Bank	Douglasville	GA	04/26/2013

The liquidation of the assets for each receivership has been completed. To the extent permitted by available funds and in accordance with law, the Receiver will be making a final dividend payment to proven creditors.

Based upon the foregoing, the Receiver has determined that the continued existence of the receiverships will serve no useful purpose. Consequently, notice is given that the receiverships shall be terminated, to be effective no sooner than thirty days after the date of this notice. If any person wishes to comment concerning the termination of any of the receiverships, such comment must be made in writing, identify the receivership to which the comment pertains, and be sent within thirty days of the date of this notice to: Federal Deposit Insurance Corporation, Division of Resolutions and Receiverships, Attention: Receivership Oversight Department 34.6, 1601 Bryan Street, Dallas, TX 75201.

No comments concerning the termination of the above-mentioned receiverships will be considered which are not sent within this time frame.

Authority: 12 U.S.C. 1819

Federal Deposit Insurance Corporation.

Dated at Washington, DC, on December 4, 2020.

James P. Sheesley,

Assistant Executive Secretary.

[FR Doc. 2020–27066 Filed 12–9–20; 8:45 am]

BILLING CODE 6714–01–P

FEDERAL DEPOSIT INSURANCE CORPORATION

FDIC Advisory Committee on Economic Inclusion; Notice of Charter Renewal

AGENCY: Federal Deposit Insurance Corporation (FDIC).

ACTION: Notice of renewal.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act (''FACA''), and after consultation with the General Services Administration, the Chairman of the Federal Deposit Insurance Corporation has determined that renewal of the FDIC Advisory Committee on Economic Inclusion (''the Committee'') is in the public interest in connection with the performance of duties imposed upon the FDIC by law. The Committee has been a successful undertaking by the FDIC and has provided valuable feedback to the agency on important initiatives focused on expanding access to banking services for underserved populations. The Committee will continue to provide advice and recommendations on initiatives to expand access to banking services for underserved populations. The Committee will continue to review various issues that may include, but not be limited to, basic retail financial services such as low-cost, sustainable transaction accounts, savings accounts, small dollar lending, prepaid cards, money orders, remittances, the use of new technologies, and other services to promote access to the mainstream banking system, asset accumulation, and financial stability. The structure and responsibilities of the Committee are unchanged from when it was originally established in November 2006. The Committee will continue to operate in accordance with the provisions of the Federal Advisory Committee Act.

FOR FURTHER INFORMATION CONTACT: Mr. Robert E. Feldman, Committee Management Officer of the FDIC, at (202) 898–7043.

Dated: December 3, 2020.

Federal Deposit Insurance Corporation.

James P. Sheesley,

Assistant Executive Secretary.

[FR Doc. 2020–27108 Filed 12–9–20; 8:45 am]

BILLING CODE 6714–01–P

FEDERAL MARITIME COMMISSION

Notice of Agreements Filed

The Commission hereby gives notice of the filing of the following agreements under the Shipping Act of 1984. Interested parties may submit comments, relevant information, or documents regarding the agreements to the Secretary by email at *Secretary@fmc.gov,* or by mail, Federal Maritime Commission, Washington, DC 20573. Comments will be most helpful to the Commission if received within 12 days of the date this notice appears in the **Federal Register**. Copies of agreements are available through the Commission's website (*www.fmc.gov*) or by contacting the Office of Agreements at (202) 523–5793 or *tradeanalysis@fmc.gov.*

Agreement No.: 011550–020.

Agreement Name: ABC Discussion Agreement.

Parties: King Ocean Services Limited, Inc. and Seaboard Marine Ltd.

Filing Party: Wayne Rohde; Cozen O'Connor.

Synopsis: The amendment deletes Crowley Caribbean Services LLC as a party to the agreement.

Proposed Effective Date: 11/30/2020.

Location: https://www2.fmc.gov/FMC.Agreements.Web/Public/AgreementHistory/883.

Agreement No.: 201349–001.

Agreement Name: World Shipping Council Agreement.

Parties: COSCO SHIPPING Lines Co., Ltd., Orient Overseas Container Line Ltd., and OOCL (Europe) Limited (acting as a single party); CMA CGM S.A., APL Co. Pte. Ltd., American President Lines, LLC, and ANL Singapore Pte. Ltd. (acting as a single party); Crowley Caribbean Services LLC and Crowley Latin America Services, LLC (acting as a single party); Evergreen Marine Corporation (Taiwan) Ltd.; Hapag-Lloyd AG; HMM Company Limited; Independent Container Line, Ltd.; Kawasaki Kisen Kaisha Ltd.; Maersk A/S and Hamburg Sud (acting as a single party); MSC Mediterranean Shipping Company S.A.; Mitsui O.S.K. Lines Ltd.; Nippon Yusen Kaisha; Ocean Network Express Pte. Ltd.; Wallenius Wilhelmsen Ocean AS; Wan Hai Lines Ltd. and Wan Hai Lines (Singapore) Pte. Ltd. (acting as a single party); Yang

Ming Marine Transport Corp.; Zim Integrated Shipping Services, Ltd.; and Matson Navigation Company, Inc.

Filing Party: Robert Magovern; Cozen O'Connor.

Synopsis: The Amendment adds Matson Navigation Company, Inc. as a party to the Agreement.

Proposed Effective Date: 1/15/2021.

Location: https://www2.fmc.gov/FMC.Agreements.Web/Public/AgreementHistory/34503.

Dated: December 4, 2020.

Rachel E. Dickon,

Secretary.

[FR Doc. 2020–27067 Filed 12–9–20; 8:45 am]

BILLING CODE 6730–02–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2020–N–2196]

Allergan Pharmaceuticals International, Ltd.; Withdrawal of Approval of a New Drug Application for ASACOL (Mesalamine) Delayed-Release Tablets, 400 Milligrams

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is withdrawing the approval of the new drug application (NDA) for ASACOL (mesalamine) delayed-release tablets, 400 milligrams (mg), held by Allergan Pharmaceuticals International, Ltd., c/o Allergan Sales, LLC, 2525 Dupont Dr., Irvine, CA 92612 (Allergan). Pursuant to FDA's request, Allergan agreed to withdrawal of this application and has waived its opportunity for a hearing.

DATES: Approval is withdrawn as of December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Kimberly Lehrfeld, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 6226, Silver Spring, MD 20993–0002, 301–796–3137, *Kimberly.Lehrfeld@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: On January 31, 1992, FDA approved NDA 019651 for ASACOL (mesalamine) delayed-release tablets, 400 mg. It is approved for the treatment of mildly to moderately active ulcerative colitis (UC) in patients 5 years of age and older, and for the maintenance of remission of mildly to moderately active UC in adults. In December 2012, FDA published the guidance for industry ''Limiting the Use of Certain Phthalates as Excipients in CDER-Regulated Products,'' available at *https://www.fda.gov/media/83029/download,* describing evidence that certain phthalate esters (phthalates), including dibutyl phthalate (DBP) and di(2-ethylhexyl) phthalate from pharmaceutical products, are developmental and reproductive toxicants in laboratory animals. This evidence has raised concerns about human exposure to phthalates, particularly in vulnerable populations such as pregnant women and infants. ASACOL (mesalamine) delayed-release tablets, 400 mg, contain DBP as an inactive ingredient. On September 6, 2017, FDA notified Allergen that because ASACOL (mesalamine) delayed-release tablets, 400 mg, contains DBP, the product presents a potential problem that is sufficiently serious to warrant withdrawal of approval. On December 22, 2017, Allergan agreed to have FDA withdraw approval of NDA 019651 for ASACOL (mesalamine) delayed-release tablets, 400 mg, under § 314.150(d) (21 CFR 314.150(d)) and waived its opportunity for a hearing.

For the reasons discussed above, and pursuant to the applicant's agreement, approval of NDA 019651 for ASACOL (mesalamine) delayed-release tablets, 400 mg, and all amendments and supplements thereto, is withdrawn under § 314.150(d).

Distribution of ASACOL (mesalamine) delayed-release tablets, 400 mg, into interstate commerce without an approved application is illegal and subject to regulatory action (see sections 505(a) and 301(d) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(a) and 331(d)).

Dated: December 4, 2020.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2020–27082 Filed 12–9–20; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2020–N–2227]

Food and Drug Administration Fiscal Year 2020 Performance Review Board

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing the names of the members who will serve on its fiscal year (FY) 2020 Performance Review Board (PRB). The purpose of the PRB is to provide fair and impartial review of Senior Executive Service (SES), Senior Professional, 21st Century Cures Act, and Title 42(f) (SES Equivalents) performance appraisals, bonus recommendations, and pay adjustments.

DATES: Approved October 1, 2020.

FOR FURTHER INFORMATION CONTACT: Abu Sesay, Office of Human Capital Management (OHCM), Three White Flint North, 02C47, 11601 Landsdown St., North Bethesda, MD 20852, Office Number: 240–402–0440 (not a toll-free number).

SUPPLEMENTARY INFORMATION: This action is being taken pursuant to 5 U.S.C. 4314(c)(4), which requires that members of performance review boards be appointed in a manner to ensure consistency, stability, and objectivity in performance appraisals and requires that notice of the appointment of an individual to serve as a member be published in the **Federal Register**.

The following persons will serve on the FDA FY 2020 Performance Review Board, which oversees the evaluation of performance appraisals of FDA's Senior Executives and Equivalents:

- James Sigg, PRB Chair
- Tania Tse, PRB Officiator
- Glenda Barfell
- Janelle Barth
- Vincent Bunning
- Mary Beth Clarke
- Elizabeth Dickinson
- Tracey Forfa
- Denise Huttenlocker
- Diane Maloney
- William Tootle

Dated: December 4, 2020.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2020–27123 Filed 12–9–20; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Proposed Collection: Public Comment Request; Information Collection Request Title: Rural Health Clinic COVID–19 Testing Program Data Collection, OMB No. 0906–0056 – Extension

AGENCY: Health Resources and Services Administration (HRSA), Department of Health and Human Services.

ACTION: Notice.

SUMMARY: In compliance with the requirement for opportunity for public comment on proposed data collection projects of the Paperwork Reduction Act of 1995, HRSA announces plans to submit an Information Collection Request (ICR), described below, to the Office of Management and Budget (OMB). Prior to submitting the ICR to OMB, HRSA seeks comments from the public regarding the burden estimate or any other aspect of the ICR.

DATES: Comments on this ICR should be received no later than February 8, 2021.

ADDRESSES: Submit your comments to *paperwork@hrsa.gov* or mail the HRSA Information Collection Clearance Officer, Room 14N136B, 5600 Fishers Lane, Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the data collection plans and draft instruments, email *paperwork@hrsa.gov* or call Lisa Wright-Solomon, the HRSA Information Collection Clearance Officer at (301) 443–1984.

SUPPLEMENTARY INFORMATION: When submitting comments or requesting information, please include the information request collection title for reference.

Information Collection Request Title: Rural Health Clinic COVID–19 Testing Program Data Collection, OMB No. 0906–0056 – Extension

Abstract: This ICR is for continued approval of the Rural Health Clinic (RHC) COVID–19 Testing Program Data Collection. HRSA is proposing to continue this data collection with no changes. The current performance measures are collected electronically in the RHC COVID–19 Testing Report (CTR), which funded provider's access via rhccovidreporting.com. RHC COVID–19 Testing Program Data Collection supports the HRSA requirement to monitor and report on funds distributed under the Paycheck Protection Program and Health Care Enhancement Act. Signed into law on April 24, 2020, the Paycheck Protection Program and Health Care Enhancement Act appropriated $225 million to RHCs to support COVID–19 testing efforts, expand access to testing in rural communities, and other related expenses. On May 20, 2020, HRSA issued funding as one-time payments to 2,406 RHC organizations based on the number of certified clinic sites they operate, providing $49,461.42 per clinic site (4,549 RHC clinic sites total across the country).

The RHC CTR collects monthly, aggregate data from funded organizations. Funded organizations provide basic identifying information, report on the number of and location of testing sites, indicate how they used the funds, and report the total number of patients tested and the number of tests with a positive result.

Funded organizations must report the number of patients tested and the number of positive tests on a monthly basis for the duration of the reporting period. HRSA will use this information to evaluate the effectiveness of the COVID–19 Testing Program at an aggregate level, to understand how the RHC COVID–19 Testing Program funding is being used to support RHC organizations and patients, and to ensure that it is compliant with federal reporting requirements.

Need and Proposed Use of the Information: The RHC CTR is designed to collect information from funded providers who use the RHC COVID–19 Testing Program funding to support COVID–19 testing efforts, expand access to testing in rural communities, and other related expenses. These data are critical to meet HRSA requirements to monitor and report on how federal funding is being used and to measure the effectiveness of RHC CTR. Specifically, these data will be used to assess the following:

- Whether program funds are being spent for their intended purposes;
- Where COVID–19 testing supported by these funds is occurring;
- Number of patients tested for COVID–19; and
- Results of provided COVID–19 tests.

Likely Respondents: RHC organizations who received funding for COVID–19 testing and related expenses.

Burden Statement: Burden in this context means the time expended by persons to generate, maintain, retain, disclose or provide the information requested. This includes the time needed to review instructions; to develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; to train personnel and to be able to respond to a collection of information; to search data sources; to complete and review the collection of information; and to transmit or otherwise disclose the information. The total annual burden hours estimated for this ICR are summarized in the table below.

TOTAL ESTIMATED ANNUALIZED BURDEN HOURS:

Form name	Number of respondents	Number of responses per respondent	Total responses	Average burden per response (in hours)	Total burden hours
RHC COVID–19 Testing Report (RHC CTR)	2,406	12	28,872	.25	7,218

HRSA specifically requests comments on (1) the necessity and utility of the proposed information collection for the proper performance of the agency's functions, (2) the accuracy of the estimated burden, (3) ways to enhance the quality, utility, and clarity of the information to be collected, and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

Maria G. Button,

Director, Executive Secretariat.

[FR Doc. 2020–27063 Filed 12–9–20; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meeting

Pursuant to section 10(d) 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: Center for Scientific Review Special Emphasis Panel; Electronic Nicotine Delivery Systems (ENDS): Population, Clinical and Applied Prevention Research.

Date: January 5, 2021.

Time: 11:00 a.m. to 1:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Telephone Conference Call).

Contact Person: Miriam Mintzer, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3108, MSC 7808, Bethesda, MD 20892, (301) 523–0646, *mintzermz@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: December 7, 2020.

Patricia B. Hansberger,

Supervisory Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2020–27182 Filed 12–9–20; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Proposed Collection; 60-Day Comment Request; CareerTrac

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: In compliance with the requirement of the Paperwork Reduction Act of 1995 to provide opportunity for public comment on proposed data collection projects, the National Institutes of Health Fogarty International Center (FIC), National Institute of Environmental Health Sciences (NIEHS), including the Superfund Research Program (SRP) within NIEHS, and National Cancer Institute (NCI), will publish periodic summaries of propose projects to be submitted to the Office of Management and Budget (OMB) for review and approval.

DATES: Comments regarding this information collection are best assured of having their full effect if received within 60 days of the date of this publication.

FOR FURTHER INFORMATION CONTACT: To obtain a copy of the data collection plans and instruments, submit comments in writing, or request more information on the proposed project, contact: Dr. Rachel Sturke, Evaluation Officer, Division of Science Policy, Planning, and Evaluation, FIC, NIH, 16 Center Drive, Bethesda, MD 20892 or call non-toll-free number (301) 480–6025 or Email your request, including your address to: *rachel.sturke@nih.gov.* Formal requests for additional plans and instruments must be requested in writing.

SUPPLEMENTARY INFORMATION: Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 requires: Written comments and/or suggestions from the public and affected agencies are invited to address one or more of the following points: (1) Whether the proposed collection of information is necessary for the proper performance of the function 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, 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 minimizes the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Proposed Collection Title: CareerTrac, 0925–0568, Expiration *Date:* 04/30/2021—REVISION, Fogarty International Center (FIC), National Institute of Environmental Health Sciences (NIEHS), National Cancer Institute (NCI), National Institutes of Health (NIH).

Need and Use of Information Collection: The purpose of this data collection system is to track, evaluate and report short and long-term outputs, outcomes and impacts of trainees involved in health research training programs-specifically tracking this for at least ten years following training by having Principal Investigators enter data after trainees have completed the program. The data collection system provides a streamlined, web-based application permitting principal investigators to record career achievement progress by trainee on a voluntary basis. FIC, NIEHS, and NCI management will use this data to monitor, evaluate and adjust grants to ensure desired outcomes are achieved, comply with OMB Part requirements, respond to congressional inquiries, and as a guide to inform future strategic and management decisions regarding the grant program.

OMB approval is requested for 3 years. There are no costs to respondents other than their time. The total estimated annualized burden hours are 12,305.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Number of respondents	Number of responses per respondent	Average time per response (in hours)	Total annual burden hour
FIC Grantee	90	20	40/60	1,200
NIEHS Grantee	60	45	40/60	1,800
NCI CRCHD Grantee	244	22	40/60	3,579
NCI D43 Grantee	20	22	40/60	293
Superfund Grantee	30	105	40/60	2,100
Trainees	5,000	1	40/60	3,333

ESTIMATED ANNUALIZED BURDEN HOURS—Continued

Type of respondent	Number of respondents	Number of responses per respondent	Average time per response (in hours)	Total annual burden hour
Total	5,444	18,458		12,305

Dated: December 4, 2020.

Celia W Katz,

Project Clearance Liaison, Fogarty International Center, National Institutes of Health.

[FR Doc. 2020–27184 Filed 12–9–20; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Eunice Kennedy Shriver National Institute of Child Health & Human Development; Notice of Closed Meetings

Pursuant to section 10(d) 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/or contract proposals 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 Child Health and Human Development Initial Review Group; Population Sciences Subcommittee Population Sciences Subcommittee.

Date: February 19, 2021.

Time: 8:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIH/NICHD Offices, 6710B Rockledge, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Christiane M. Robbins, Scientific Research Officer, Scientific Review Branch (SRB), DER, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS, 6710B Rockledge Drive, Rm. 2121B, Bethesda, MD 20817, 301–451–4989, *crobbins@mail.nih.gov.*

Name of Committee: National Institute of Child Health and Human Development Special Emphasis Panel; RUMP SEP.

Date: February 19, 2021.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIH/NICHD Offices, 6710B Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Christiane M. Robbins, Scientific Review Officer, Scientific Review Branch (SRB), DER, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS, 6710B Rockledge Drive, Rm. 2121A, Bethesda, MD 20817, 301–451–4989, *crobbins@mail.nih.gov.*

Name of Committee: National Institute of Child Health and Human Development Initial Review Group; Population Sciences Subcommittee Population Sciences Subcommittee.

Date: June 24, 2021.

Time: 8:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIH/NICHD Offices, 6710B Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Christiane M. Robbins, Scientific Research Officer, Scientific Review Branch (SRB), DER, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS, 6710B Rockledge Drive, Rm. 2121B, Bethesda, MD 20817, 301–451–4989, *crobbins@mail.nih.gov.*

Name of Committee: National Institute of Child Health and Human Development Special Emphasis Panel; RUMP SEP.

Date: June 24, 2021.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIH/NICHD Offices, 6710B Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Christiane M. Robbins, Scientific Review Officer, Scientific Review Branch (SRB), DER, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS, 6710B Rockledge Drive, Rm. 2121A, Bethesda, MD 20817, 301–451–4989, *crobbins@mail.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.864, Population Research; 93.865, Research for Mothers and Children; 93.929, Center for Medical Rehabilitation Research; 93.209, Contraception and Infertility Loan Repayment Program, National Institutes of Health, HHS)

Dated: December 7, 2020.

Ronald J. Livingston, Jr.,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2020–27183 Filed 12–9–20; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3542–EM; Docket ID FEMA–2020–0001]

Oregon; Amendment No. 1 to Notice of an Emergency Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of an emergency declaration for the State of Oregon (FEMA–3542–EM), dated September 10, 2020, and related determinations.

DATES: This amendment was issued November 20, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this emergency is closed effective September 15, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27162 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3550–EM; Docket ID FEMA–2020–0001]

Mississippi; Emergency and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of an emergency for the State of Mississippi (FEMA–3550–EM), dated October 28, 2020, and related determinations.

DATES: The declaration was issued October 28, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 28, 2020, the President issued an emergency declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121–5207 (the Stafford Act), as follows:

I have determined that the emergency conditions in certain areas of the State of Mississippi resulting from Hurricane Zeta beginning on October 27, 2020, and continuing, are of sufficient severity and magnitude to warrant an emergency declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (''the Stafford Act''). Therefore, I declare that such an emergency exists in the State of Mississippi.

You are authorized to provide appropriate assistance for required emergency measures, authorized under title V of the Stafford Act, to save lives and to protect property and public health and safety, and to lessen or avert the threat of a catastrophe in the designated areas. Specifically, you are authorized to provide assistance for emergency protective measures (Category B), including direct Federal assistance, under the Public Assistance program.

Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance will be limited to 75 percent of the total eligible costs. In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal emergency assistance and administrative expenses.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, Department of Homeland Security, under Executive Order 12148, as amended, Brett H. Howard, of FEMA is appointed to act as the Federal Coordinating Officer for this declared emergency.

The following areas of the State of Mississippi have been designated as adversely affected by this declared emergency:

Emergency protective measures (Category B), including direct Federal assistance, under the Public Assistance program for Clarke, Forrest, George, Greene, Hancock, Harrison, Jackson, Jones, Lamar, Pearl River, Perry, Stone, and Wayne Counties.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27170 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3547–EM; Docket ID FEMA–2020–0001]

Louisiana; Amendment No. 2 to Notice of an Emergency Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of an emergency declaration for the State of Louisiana (FEMA–3547–EM), dated October 7, 2020, and related determinations.

DATES: This amendment was issued November 16, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this emergency is closed effective October 10, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27164 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4562–DR; Docket ID FEMA–2020–0001]

Oregon; Amendment No. 3 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Oregon (FEMA–4562–DR), dated September 15, 2020, and related determinations.

DATES: This amendment was issued November 16, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this disaster is closed effective November 3, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034,

Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27160 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4569–DR; Docket ID FEMA–2020–0001]

California; Amendment No. 3 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of California (FEMA–4569–DR), dated October 16, 2020, and related determinations.

DATES: This amendment was issued November 25, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of California is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 16, 2020.

Del Norte County for Public Assistance, including direct federal assistance.

Fresno, Madera, Mendocino, Napa, Shasta, Siskiyou, and Sonoma Counties for debris removal [Category A] and permanent work [Categories C–G] (already designated for Individual Assistance and emergency protective measures [Category B], including direct federal assistance, under the Public Assistance program).

Yuba County for debris removal and emergency protective measures (Categories A and B), including direct federal assistance, under the Public Assistance program.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27178 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4566–DR; Docket ID FEMA–2020–0001]

Delaware; Amendment No. 1 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Delaware (FEMA–4566–DR), dated October 2, 2020, and related determinations.

DATES: This amendment was issued December 2, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of Delaware is hereby amended to include the following area among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 2, 2020.

New Castle County for Public Assistance.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27161 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4570–DR; Docket ID FEMA–2020–0001]

Louisiana; Amendment No. 1 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Louisiana (FEMA–4570–DR), dated October 16, 2020, and related determinations.

DATES: This amendment was issued November 6, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of Louisiana is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 16, 2020.

Beauregard, Lafayette, Rapides, St. Landry, and St. Martin Parishes for Individual Assistance.

Allen, Evangeline, Grant, Iberia, Lafayette, Rapides, St. Landry, and St. Martin Parishes for debris removal (Category A), under the Public Assistance program).

Allen, Ascension, Assumption, Avoyelles, Beauregard, Catahoula, Concordia, East Baton Rouge, East Feliciana, Evangeline, Grant, Iberia, Iberville, Jefferson, La Salle, Livingston, Lafayette, Lafourche, Natchitoches, Orleans, Ouachita, Plaquemines, Pointe Coupee, Rapides, Sabine, St. Bernard, St. Charles, St. Helena, St. James, St. John the Baptist, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, Tensas, Terrebonne, Vernon, Washington, West Baton Rouge, West Feliciana, and Winn

Parishes for emergency protective measures (Category B), including direct federal assistance, under the Public Assistance program.

Bienville, Bossier, Caddo, Caldwell, Claiborne,

De Soto, East Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Red River, Richland, Union, Webster, and West Carroll Parishes for emergency protective measures (Category B), limited to direct federal assistance, under the Public Assistance program.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27180 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3549–EM; Docket ID FEMA–2020–0001]

Louisiana; Emergency and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of an emergency for the State of Louisiana (FEMA–3549–EM), dated October 27, 2020, and related determinations.

DATES: The declaration was issued October 27, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 27, 2020, the President issued an emergency declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), as follows:

I have determined that the emergency conditions in certain areas of the State of Louisiana resulting from Tropical Storm Zeta beginning on October 26, 2020, and continuing, are of sufficient severity and magnitude to warrant an emergency declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (''the Stafford Act''). Therefore, I declare that such an emergency exists in the State of Louisiana.

You are authorized to provide appropriate assistance for required emergency measures, authorized under title V of the Stafford Act, to save lives and to protect property and public health and safety, and to lessen or avert the threat of a catastrophe in the designated areas. Specifically, you are authorized to provide Public Assistance Category B emergency protective measures, including direct Federal assistance in selected areas and Public Assistance Category B emergency protective measures, limited to direct Federal assistance in the other designated areas.

Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance will be limited to 75 percent of the total eligible costs. In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal emergency assistance and administrative expenses.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, under Executive Order 12148, as amended, John E. Long, of FEMA is appointed to act as the Federal Coordinating Officer for this declared emergency.

The following areas of the State of Louisiana have been designated as adversely affected by this declared emergency:

Public Assistance Category B emergency protective measures, including direct federal assistance for the parishes of Acadia, Allen, Ascension, Assumption, Beauregard, Calcasieu, Cameron, East Baton Rouge, East Feliciana, Evangeline, Iberia, Iberville, Jefferson, Jefferson Davis, Livingston, Lafayette, Lafourche, Orleans, Plaquemines, Pointe Coupee, St. Bernard, St. Charles, St. Helena, St. James, St. John the Baptist, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, Vermilion, Washington, West Baton Rouge, and West Feliciana.

Public Assistance Category B emergency protective measures, limited to direct federal assistance for the parishes of Avoyelles, Bienville, Bossier, Caddo, Caldwell, Catahoula, Claiborne, Concordia, DeSoto, East Carroll, Franklin, Grant, Jackson, La Salle, Lincoln, Madison, Morehouse, Natchitoches, Ouachita, Rapides, Red River, Richland, Sabine, Tensas, Union, Vernon, Webster, West Carroll, and Winn.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27167 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4569–DR; Docket ID FEMA–2020–0001]

California; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of a major disaster for the State of California (FEMA–4569–DR), dated October 16, 2020, and related determinations.

DATES: The declaration was issued October 16, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 16, 2020, the President issued a major disaster declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), as follows:

I have determined that the damage in certain areas of the State of California resulting from wildfires beginning on September 4, 2020, and continuing, is of

sufficient severity and magnitude to warrant a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''). Therefore, I declare that such a major disaster exists in the State of California.

In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal disaster assistance and administrative expenses.

You are authorized to provide Individual Assistance and emergency protective measures (Category B), including direct Federal assistance, under the Public Assistance program in the designated areas; Hazard Mitigation throughout the State, and any other forms of assistance under the Stafford Act that you deem appropriate subject to completion of Preliminary Damage Assessments (PDAs).

Consistent with the requirement that Federal assistance is supplemental, any Federal funds provided under the Stafford Act for Public Assistance, Hazard Mitigation, and Other Needs Assistance under section 408 will be limited to 75 percent of the total eligible costs.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The time period prescribed for the implementation of section 310(a), Priority to Certain Applications for Public Facility and Public Housing Assistance, 42 U.S.C. 5153, shall be for a period not to exceed six months after the date of this declaration.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, under Executive Order 12148, as amended, Willie G. Nunn, of FEMA is appointed to act as the Federal Coordinating Officer for this major disaster.

The following areas of the State of California have been designated as adversely affected by this major disaster:

Fresno, Los Angeles, Madera, Mendocino, San Bernardino, San Diego, and Siskiyou Counties for Individual Assistance.

Fresno, Los Angeles, Madera, Mendocino, San Bernardino, San Diego, and Siskiyou Counties for emergency protective measures (Category B), including direct federal assistance, under the Public Assistance program.

All areas within the State of California are eligible for assistance under the Hazard Mitigation Grant Program.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27176 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4559–DR; Docket ID FEMA–2020–0001]

Louisiana; Amendment No. 13 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Louisiana (FEMA–4559–DR), dated August 28, 2020, and related determinations.

DATES: This amendment was issued October 29, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 29, 2020, the President amended the cost-sharing arrangements regarding Federal funds provided under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), in a letter to Pete Gaynor, Administrator, Federal Emergency Management Agency, Department of Homeland Security, under Executive Order 12148, as follows:

I have determined that the damage in certain areas of the State of Louisiana resulting from Hurricane Laura during the period of August 22 to August 27, 2020, is of sufficient severity and magnitude that special cost sharing arrangements are warranted regarding Federal funds provided under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act'').

Therefore, I amend my declaration of August 28, 2020, to authorize a 100 percent Federal cost share for debris removal and emergency protective measures (Categories A and B), including direct Federal assistance, under the Public Assistance program for a continuous period of 30 days established by the State of Louisiana.

(The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27173 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4558–DR; Docket ID FEMA–2020–0001]

California; Amendment No. 10 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of California (FEMA–4558–DR), dated August 22, 2020, and related determinations.

DATES: This amendment was issued November 12, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of California is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of August 22, 2020.

Butte County for permanent work [Categories C–G] (already designated for Individual Assistance and assistance for

debris removal and emergency protective measures [Categories A and B], including direct federal assistance, under the Public Assistance program).

Mendocino County for Individual Assistance and assistance for debris removal and emergency protective measures (Categories A and B), including direct federal assistance, under the Public Assistance program.

Plumas County for debris removal [Category A] and permanent work [Categories C–G] (already designated for emergency protective measures [Category B], including direct federal assistance, under the Public Assistance program).

Stanislaus County for Individual Assistance and Public Assistance, including direct federal assistance.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27172 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4569–DR; Docket ID FEMA–2020–0001]

California; Amendment No. 2 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of California (FEMA–4569–DR), dated October 16, 2020, and related determinations.

DATES: This amendment was issued November 20, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this disaster is closed effective November 17, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27177 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4570–DR; Docket ID FEMA–2020–0001]

Louisiana; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of a major disaster for the State of Louisiana (FEMA–4570–DR), dated October 16, 2020, and related determinations.

DATES: The declaration was issued October 16, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 16, 2020, the President issued a major disaster declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), as follows:

I have determined that the damage in certain areas of the State of Louisiana resulting from Hurricane Delta during the period of October 6 to October 10, 2020, is of sufficient severity and magnitude to warrant a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''). Therefore, I declare that such a major disaster exists in the State of Louisiana.

In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal disaster assistance and administrative expenses.

You are authorized to provide Individual Assistance and assistance for debris removal and emergency protective measures, including direct Federal assistance, under the Public Assistance program in the designated areas, Hazard Mitigation throughout the State, and any other forms of assistance under the Stafford Act that you deem appropriate subject to completion of Preliminary Damage Assessments (PDAs).

Consistent with the requirement that Federal assistance is supplemental, any Federal funds provided under the Stafford Act for Public Assistance, Hazard Mitigation, and Other Needs Assistance under section 408 will be limited to 75 percent of the total eligible costs.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The time period prescribed for the implementation of section 310(a), Priority to Certain Applications for Public Facility and Public Housing Assistance, 42 U.S.C. 5153, shall be for a period not to exceed six months after the date of this declaration.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, under Executive Order 12148, as amended, John E. Long, of FEMA is appointed to act as the Federal Coordinating Officer for this major disaster.

The following areas of the State of Louisiana have been designated as adversely affected by this major disaster:

Acadia, Calcasieu, Cameron, Jefferson Davis, and Vermilion Parishes for Individual Assistance.

Acadia, Calcasieu, Cameron, Jefferson Davis, and Vermilion Parishes for debris removal and emergency protective measures (Categories A and B), including direct federal assistance, under the Public Assistance program.

All areas within the State of Louisiana are eligible for assistance under the Hazard Mitigation Grant Program.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially

Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27179 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3547–EM; Docket ID FEMA–2020–0001]

Louisiana; Emergency and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of an emergency for the State of Louisiana (FEMA–3547–EM), dated October 7, 2020, and related determinations.

DATES: The declaration was issued October 7, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 7, 2020, the President issued an emergency declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), as follows:

I have determined that the emergency conditions in the State of Louisiana resulting from Hurricane Delta beginning on October 6, 2020, and continuing, are of sufficient severity and magnitude to warrant an emergency declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (''the Stafford Act''). Therefore, I declare that such an emergency exists in the State of Louisiana.

You are authorized to provide appropriate assistance for required emergency measures, authorized under title V of the Stafford Act, to save lives and to protect property and public health and safety, and to lessen or avert the threat of a catastrophe in the designated areas. Specifically, you are authorized to provide Public Assistance Category B emergency protective measures, including direct Federal assistance in selected areas and Public Assistance Category B emergency protective measures, limited to direct Federal assistance in the other designated areas.

Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance will be limited to 75 percent of the total eligible costs. In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal emergency assistance and administrative expenses.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, under Executive Order 12148, as amended, John E. Long, of FEMA is appointed to act as the Federal Coordinating Officer for this declared emergency.

The following areas of the State of Louisiana have been designated as adversely affected by this declared emergency:

Public Assistance Category B emergency protective measures, including direct federal assistance for the parishes of Acadia, Allen, Ascension, Assumption, Avoyelles, Beauregard, Calcasieu, Cameron, Catahoula, Concordia, East Baton Rouge, East Feliciana, Evangeline, Iberia, Iberville, Jefferson, Jefferson Davis, Livingston, Lafayette, Lafourche, Orleans, Ouachita, Plaquemines, Pointe Coupee, Rapides, St. Bernard, St. Charles, St. Helena, St. James, St. John the Baptist, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, Tensas, Terrebonne, Vermilion, Washington, West Baton Rouge, and West Feliciana.

Public Assistance Category B emergency protective measures, limited to direct federal assistance for the parishes of Bienville, Bossier, Caddo, Caldwell, Claiborne, De Soto, East Carroll, Franklin, Grant, Jackson, La Salle, Lincoln, Madison, Morehouse, Natchitoches, Red River, Richland, Sabine, Union, Vernon, Webster, West Carroll, and Winn.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27163 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3548–EM; Docket ID FEMA–2020–0001]

Mississippi; Amendment No. 1 to Notice of an Emergency Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of an emergency declaration for the State of Mississippi (FEMA–3548–EM), dated October 8, 2020, and related determinations.

DATES: This amendment was issued October 19, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this emergency is closed effective October 11, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27166 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3549–EM; Docket ID FEMA–2020–0001]

Louisiana; Amendment No. 1 to Notice of an Emergency Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of an emergency declaration for the State of Louisiana (FEMA–3549–EM), dated October 27, 2020, and related determinations.

DATES: This amendment was issued November 16, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this emergency is closed effective October 29, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27168 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3550–EM; Docket ID FEMA–2020–0001]

Mississippi; Amendment No. 1 to Notice of an Emergency Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of an emergency declaration for the State of Mississippi (FEMA–3550–EM), dated October 28, 2020, and related determinations.

DATES: This amendment was issued November 6, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the incident period for this emergency is closed effective October 29, 2020.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27171 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4571–DR; Docket ID FEMA–2020–0001]

Puerto Rico; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of a major disaster for the Commonwealth of Puerto Rico (FEMA–4571–DR), dated November 5, 2020, and related determinations.

DATES: The declaration was issued November 5, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated November 5, 2020, the President issued a major disaster declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''), as follows:

I have determined that the damage in certain areas of the Commonwealth of Puerto Rico resulting from a severe storm and flooding on September 13, 2020, is of sufficient severity and magnitude to warrant a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (the ''Stafford Act''). Therefore, I declare that such a major disaster exists in the Commonwealth of Puerto Rico.

In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal disaster assistance and administrative expenses.

You are authorized to provide Individual Assistance in the designated areas. Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Other Needs Assistance under section 408 will be limited to 75 percent of the total eligible costs.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The time period prescribed for the implementation of section 310(a), Priority to Certain Applications for Public Facility and Public Housing Assistance, 42 U.S.C. 5153, shall be for a period not to exceed six months after the date of this declaration.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, under Executive Order 12148, as amended, Claude Hyacinthe, of FEMA is appointed to act as the Federal Coordinating Officer for this major disaster.

The following area of the Commonwealth of Puerto Rico have been designated as adversely affected by this major disaster:

Arecibo Municipality for Individual Assistance.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049,

Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27181 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–3548–EM; Docket ID FEMA–2020–0001]

Mississippi; Emergency and Related Determinations

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of an emergency for the State of Mississippi (FEMA–3548–EM), dated October 8, 2020, and related determinations.

DATES: The declaration was issued October 8, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 8, 2020, the President issued an emergency declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121–5207 (the Stafford Act), as follows:

I have determined that the emergency conditions in certain areas of the State of Mississippi resulting from Hurricane Delta beginning on October 7, 2020, and continuing, are of sufficient severity and magnitude to warrant an emergency declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.* (''the Stafford Act''). Therefore, I declare that such an emergency exists in the State of Mississippi.

You are authorized to provide appropriate assistance for required emergency measures, authorized under title V of the Stafford Act, to save lives and to protect property and public health and safety, and to lessen or avert the threat of a catastrophe in the designated areas. Specifically, you are authorized to provide Public Assistance Category B emergency protective measures, including direct Federal assistance in selected areas and Public Assistance Category B emergency protective measures, limited to direct Federal assistance in the other designated areas.

Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance will be limited to 75 percent of the total eligible costs. In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes such amounts as you find necessary for Federal emergency assistance and administrative expenses.

Further, you are authorized to make changes to this declaration for the approved assistance to the extent allowable under the Stafford Act.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Administrator, Department of Homeland Security, under Executive Order 12148, as amended, Brett H. Howard, of FEMA is appointed to act as the Federal Coordinating Officer for this declared emergency.

The following areas of the State of Mississippi have been designated as adversely affected by this declared emergency:

Emergency protective measures (Category B), including direct Federal assistance, under the Public Assistance program for Hancock, Harrison, and Wilkinson Counties.

Emergency protective measures (Category B), limited to direct Federal assistance, under the Public Assistance program for Adams, Amite, Claiborne, Copiah, Forrest, Franklin, George, Hinds, Humphreys, Issaquena, Jackson, Jefferson, Jefferson Davis, Lawrence, Lincoln, Madison, Marion, Pearl River, Pike, Rankin, Sharkey, Simpson, Stone, Walthall, Warren, and Yazoo Counties.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27165 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4559–DR; Docket ID FEMA–2020–0001]

Louisiana; Amendment No. 14 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Louisiana (FEMA–4559–DR), dated August 28, 2020, and related determinations.

DATES: This amendment was issued November 20, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of Louisiana is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of August 28, 2020.

Avoyelles, Caldwell, and DeSoto Parishes for debris removal [Category A] (already designated for emergency protective measures [Category B], including direct federal assistance, under the Public Assistance program).

Catahoula Parish for permanent work [Categories C–G] (already designated for debris removal and emergency protective measures [Categories A and B], including direct federal assistance, under the Public Assistance program).

Iberia Parish for debris removal [Category A] and permanent work [Categories C–G] (already designated for emergency protective measures [Category B], including direct federal assistance, under the Public Assistance program).

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050, Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance

(Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27174 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4567–DR; Docket ID FEMA–2020–0001]

New York; Amendment No. 2 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of New York (FEMA–4567–DR), dated October 2, 2020, and related determinations.

DATES: This amendment was issued November 3, 2020.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of New York is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 2, 2020.

Putnam, Queens, Richmond, Rockland, and Westchester Counties for Public Assistance.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050 Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

Pete Gaynor,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2020–27175 Filed 12–9–20; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R3–ES–2020–0128; FXES11140300000–212]

Receipt of Incidental Take Permit Application and Proposed Habitat Conservation Plan for the Rosewater Wind Farm, White County, Indiana; Categorical Exclusion

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability of documents; request for comment and information.

SUMMARY: We, the U.S. Fish and Wildlife Service, have received an application from Rosewater Wind Farm LLC (applicant), for an incidental take permit (ITP) under the Endangered Species Act (ESA), for its Rosewater Wind Farm (project). If approved, the ITP would be for a 6-year period and would authorize the incidental take of an endangered species, the Indiana bat, and a threatened species, the northern long-eared bat. The applicant has prepared a habitat conservation plan that describes the actions and measures that the applicant would implement to avoid, minimize, and mitigate incidental take of the Indiana bat and northern long-eared bat. We request public comment on the application, which includes the applicant's proposed habitat conservation plan (HCP), and on the Service's preliminary determination that this HCP qualifies as ''low-effect,'' categorically excluded under the National Environmental Policy Act. To make this determination, we used our environmental action statement and low-effect screening form, both of which are also able for public review.

DATES: We will accept comments received or postmarked on or before January 11, 2021.

ADDRESSES: *Document availability:* Electronic copies of the documents this notice announces, along with public comments received, will be available online in Docket No. FWS–R3–ES–2020–0128 at *http://www.regulations.gov.*

Comment submission: In your comment, please specify whether your comment addresses the proposed HCP, draft environmental action statement, or any combination of the aforementioned documents, or other supporting documents. You may submit written comments by one of the following methods:

- *Online: http://www.regulations.gov.* Search for and submit comments on Docket No. FWS–R3–ES–2020–0128.
- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS–R3–ES–2020–0128; U.S. Fish and Wildlife Service; 5275 Leesburg Pike, MS: PRB/3W; Falls Church, VA 22041–3803.

FOR FURTHER INFORMATION CONTACT: Scott Pruitt, Field Supervisor, Bloomington Ecological Services Field Office, U.S. Fish and Wildlife Service, 620 South Walker Street, Bloomington, IN 47403; telephone: 812–334–4261, extension 214; or Andrew Horton, Regional HCP Coordinator, U.S. Fish and Wildlife Service—Interior Region 3, 5600 American Blvd., West, Suite 990, Bloomington, MN 55437–1458; telephone: 612–713–5337.

Individuals who are hearing impaired or speech impaired may call the Federal Relay Service at 1–800–877–8339 for TTY assistance.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service, have received an application from Rosewater Wind Farm LLC (applicant), for an incidental take permit (ITP) under the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*). The applicant requests the 6-year ITP to take the federally listed Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) incidental to the operation of 25 wind turbines with a total generating capacity of 102 megawatt (MW) at the Rosewater Wind Farm in White County, Indiana. While the ITP is for 6 years, the operational life of most new wind energy facilities is thirty years and intensive monitoring conducted during this permit term will inform the need for future avoidance or a new long-term ITP for the remaining life of the project that will comply with a new NEPA analysis and habitat conservation plan (HCP). The applicant has prepared a HCP that describes the actions and measures that the applicant would implement to avoid, minimize, and mitigate incidental take of the covered species for the first 6 years. We request public comment on the application, which includes the applicant's proposed HCP, and on the Service's preliminary determination that this HCP qualifies as ''low-effect,'' categorically excluded under the

National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*). To make this determination, we used our environmental action statement and low-effect screening form, both of which are also able for public review.

Background

Section 9 of the ESA and its implementing regulations prohibit the ''take'' of animal species listed as endangered or threatened. Take is defined under the ESA as to ''harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect [listed animal species,] or to attempt to engage in any such conduct'' (16 U.S.C. 1532). However, under section 10(a) of the ESA, we may issue permits to authorize incidental take of listed species. ''Incidental take'' is defined by the ESA as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity (16 U.S.C. 1539). Regulations governing incidental take permits for endangered and threatened species, respectively, are found in the Code of Federal Regulations at 50 CFR 17.22 and 50 CFR 17.32.

Applicant's Proposed Project

The applicant requests a 6-year ITP to take the federally endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*). The applicant determined that take is reasonably certain to occur incidental to operation of 25 previously constructed wind turbines in White County, Indiana, consisting of approximately 6,381 acres of private land. The proposed conservation strategy in the applicant's proposed HCP is designed to avoid, minimize, and mitigate the impacts of the covered activity on the covered species. The biological goals and objectives are to minimize potential take of Indiana bats and northern long-eared bats through onsite minimization measures and to provide habitat conservation measures for Indiana bats and northern long-eared bats to offset any impacts from operations of the project. The HCP provides on-site avoidance and minimization measures, which include turbine operational adjustments. The authorized level of take from the project is 18 Indiana bats and 18 northern long-eared bats over the 6-year permit duration. To offset the impacts of the taking of Indiana bats and northern long-eared bats, the applicant will implement one or more of the following mitigation options: Purchase credits from an approved conservation bank, contribute to an in-lieu fee mitigation fund, implement permittee responsible mitigation project, or contribute to a white-nose syndrome treatment fund if such a fund is established during the permit term.

National Environmental Policy Act

The issuance of an ITP is a Federal action that triggers the need for compliance with NEPA. The Service has made a preliminary determination that the applicant's project and the proposed mitigation measures would individually and cumulatively have a minor or negligible effect on the covered species and the environment. Therefore, we have preliminarily concluded that the ITP for this project would qualify for categorical exclusion, and the HCP would be low effect under our NEPA regulations at 43 CFR 46.205 and 46.210. A low-effect HCP is one that would result in (1) minor or negligible effects on federally listed, proposed, and candidate species and their habitats; (2) minor or negligible effects on other environmental values or resources; and (3) incremental impacts from the federal action that, when added to other past, present, and reasonable foreseeable future actions, would not result in significant cumulative effects to environmental values or resources over time.

Next Steps

The Service will evaluate the application and the comments received to determine whether the permit application meets the requirements of section 10(a) of the ESA. We will also conduct an intra-Service consultation pursuant to section 7 of the ESA to evaluate the effects of the proposed take. After considering the above findings, we will determine whether the permit issuance criteria of section 10(a)(l)(B) of the ESA have been met. If met, the Service will issue the requested ITP to the applicant.

Request for Public Comments

The Service invites comments and suggestions from all interested parties on the proposed HCP and screening form during a 30-day public comment period (see **DATES**).

In particular, information and comments regarding the following topics are requested:

1. Whether adaptive management, monitoring and mitigation provisions in the proposed HCP are sufficient;

2. The requested 6-year ITP term;

3. Any threats to the Indiana bat and the northern long-eared bat that may influence their populations over the life of the ITP that are not addressed in the proposed HCP or screening form;

4. Any new information on white-nose syndrome effects on the Indiana bat and the northern long-eared bat;

5. Whether or not the significance of the impact on various aspects of the human environment has been adequately analyzed; and

6. Any other information pertinent to evaluating the effects of the proposed action on the human environment, including those on the Indiana bat and the northern long-eared bat.

Availability of Public Comments

You may submit comments by one of the methods shown under **ADDRESSES**. We will post on *http://regulations.gov* all public comments and information received electronically or via hardcopy. All comments received, including names and addresses, will become part of the administrative record associated with this action. 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 request in your comment that we withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Authority

We provide this notice under section 10(c) of the ESA (16 U.S.C. 1531 *et seq.*) and its implementing regulations (50 CFR 17.22) and the NEPA (42 U.S.C. 4371 *et seq.*) and its implementing regulations (40 CFR 1506.6; 43 CFR part 46).

Lori Nordstrom,

Assistant Regional Director, Ecological Services.

[FR Doc. 2020–27102 Filed 12–9–20; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Office of the Secretary

[LLWO210000.L1610000]

National Environmental Policy Act Implementing Procedures for the Bureau of Land Management (516 DM 11)

AGENCY: Office of the Secretary, Interior.

ACTION: Notice.

SUMMARY: Through this notice, the Department of the Interior (Department) announces a new categorical exclusion (CX) under the National Environmental Policy Act (NEPA) implementing procedures for the Bureau of Land Management (BLM) at Chapter 11 of Part 516 of the Departmental Manual.

DATES: The categorical exclusion takes effect on December 10, 2020.

ADDRESSES: The new CX can be found at the web address *http://www.doi.gov/elips/* at Series 31, Part 516, Chapter 11. The BLM has revised the *Verification Report on the results of a Bureau of Land Management analysis of NEPA records and field verification for Pinyon-Juniper removal* (Verification Report) in response to comments received; the public can review the revised Verification Report online at: *https://go.usa.gov/xvPfT.*

FOR FURTHER INFORMATION CONTACT: Heather Bernier, Division Chief, Decision Support, Planning, and NEPA, at 303–239–3635, or *hbernier@blm.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339. The FRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

Background

NEPA requires Federal agencies to consider the potential environmental impacts of their proposed actions before deciding whether and how to proceed. The Council on Environmental Quality (CEQ) encourages Federal agencies to use CXs to protect the environment more efficiently by reducing the resources spent analyzing proposals that normally do not have significant environmental impacts, thereby allowing those resources to be focused on proposals that may have significant environmental impacts. *See* 40 CFR 1501.4, 1507.3(e)(2)(ii), and 1508.1(d). The appropriate use of CXs allows NEPA compliance, in the absence of extraordinary circumstances that merit further consideration, to be concluded without preparing either an environmental assessment (EA) or an environmental impact statement (EIS). *See* 40 CFR 1501.4 and 40 CFR 1508.1(d).

The Department's revised NEPA procedures were published in the **Federal Register** on October 15, 2008 (73 FR 61292) and are codified at 43 CFR part 46. These procedures address policy as well as procedure in order to assure compliance with NEPA. Additional Department-wide NEPA policy may be found in part 516 of the Departmental Manual (516 DM), in chapters 1 through 4. The procedures for the Department's bureaus' NEPA procedures are published as chapters 7 through 15 of 516 DM. Chapter 11 of 516 DM (516 DM 11) covers the BLM's NEPA procedures. The BLM's NEPA procedures were last updated as announced in the **Federal Register** on May 1, 2020 (85 FR 25472). The current 516 DM 11 can be found at: *https://elips.doi.gov/ELIPS/DocView.aspx?id=1721.*

The BLM has been managing sagebrush ecosystems for greater sage-grouse, mule deer, and other species for over a decade, implementing pinyon pine and juniper tree (PJ) removal treatments to restore habitat mosaics within the landscape and address the various habitat needs of mule deer and sage-grouse. PJ encroachment poses a serious threat to the health of millions of acres of land under BLM management. Following years of experience removing these trees without significant effects, the BLM has determined that establishing a CX for the actions described more particularly herein is necessary for expediting maintenance of sagebrush habitats essential to mule deer and sage-grouse.

Description of the Change

The BLM developed this CX in response to the September 15, 2017, Secretary's Order 3356, *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories,* which directed the BLM to develop a CX for ''proposed projects that utilize common practices solely intended to enhance or restore habitat for species such as sage-grouse and/or mule deer'' (section 4(d)(5)). The BLM has developed this CX to be responsive to the direction from this Secretary's Order consistent with the goals of facilitating the enhancement and restoration of habitat for sage-grouse and/or mule deer. More specifically, the BLM developed this CX for the management of encroaching pinyon pine and juniper trees for the benefit of mule deer and sage-grouse habitats.

The BLM's proposed CX and associated Verification Report were available for public review and comment for 30 days, beginning with the publication of a **Federal Register** notice on Friday, March 13, 2020, and ending on Monday, April 13, 2020 (85 FR 14700). The proposed CX provided for covered actions (and included examples of such activities) on up to 10,000 acres within sagebrush and sagebrush-steppe plant communities to manage pinyon pine and juniper trees for the benefit of mule deer or sage-grouse habitats. Paragraph (a) of the proposed CX included a list of activities that the CX did not cover, and paragraph (b) required documentation of land use plan decisions providing for protections of certain resources and resource uses.

In response to the comments received, the BLM has revised the proposed text of the CX to clarify that the 10,000 acres may be contiguous or non-contiguous and added a definition of habitat for mule deer and sage-grouse. The BLM also revised paragraph (b) to clarify the requirement to include project design features consistent with land use plans (LUPs) or document how listed resource and resource uses will be appropriately addressed where no land use plan decisions apply.

The BLM has additionally revised the Verification Report in response to the comments received to address clarifications, incorporate new literature, and support discussion of changes to the CX text. The BLM also has reviewed and revised, as appropriate, the Verification Report for consistency with the updated CEQ regulations at 40 CFR 1500–1508 (2020). 85 FR 43304 (July 16, 2020).

Comments on the Proposed CX

The BLM received a total of 3,903 comment submissions. The BLM received comments primarily through the BLM's online NEPA portal and comment platform, ePlanning, and by mail. Commenters invested considerable time and effort to submit comments on this proposal. Comments were submitted by State and local governments, environmental organizations, and private citizens. The BLM received comments both in support of the proposal and against the proposal, with both supportive and non-supportive comments also requesting revisions to the proposal.

The BLM has summarized and provided responses to all substantive comments received in this **Federal Register** notice for public review. The substantive comments address six broad topics: The scope of the CX; the purpose of the CX; incorporation of site-specific considerations in the terms of the CX; clarifications on the BLM's use of the CX; adequacy of the analysis and review done to develop the proposed CX; and the appropriateness of the procedures the BLM used to establish the CX. The BLM has considered all comments received and has provided responses to

the substantive comments identified below.

Scope of the CX

Comment: The BLM received comments that requested clarification on what qualifies as sage-grouse or mule deer habitat, given that the Verification Report does not identify what criteria will be used to identify this habitat. The BLM received comments that suggested that the CX be limited to verifiable habitat polygons for sage-grouse and mule deer.

Response: The September 15, 2017, Secretary's Order 3356, *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories,* directed the BLM to develop a proposed CX for ''proposed projects that utilize common practices solely intended to enhance or restore habitat for species such as sage-grouse and/or mule deer.'' Consequently, this CX applies specifically to the management of PJ to enhance and restore mule deer and sage-grouse habitats, not for other species' habitats that might also include PJ. For the purpose of this CX, habitat for sage-grouse and/or mule deer is any area on BLM-managed land that is currently or formerly occupied by sage-grouse and/or mule deer, or is reasonably likely to be occupied if PJ is removed, as determined by BLM wildlife professionals.

Comment: The BLM received comments that requested the BLM clarify the 10,000-acre treatment area described in the Verification Report, specifically (1) whether the authorization is for 10,000 acres over a larger area or some acres of treatment within a 10,000-acre area, and (2) the expectation that treatments be a mosaic of treated and untreated patches, and the rationale for this pattern. The comments provided several scientific references noting that large expanses of conifer-free habitat are most beneficial for sage-grouse and requested that the BLM consider these references in determining the appropriate scope of the CX.

Response: The Verification Report states that ''while this CX would authorize 10,000 acres of treatment, the BLM expects the treatments to be scattered across the landscape rather than in a large contiguous block.'' The BLM has added language to section 1.A.c (*The size of each project*) of the Verification Report to clarify that ''[e]valuation areas in the EAs were larger than the ultimate proposed treatment areas'' and ''[t]herefore, while this CX would authorize 10,000 acres of treatment, the BLM expects the treatments (up to 10,000 combined acres per project) to be scattered across the landscape rather than in a large contiguous block; however, this is not a requirement of the CX, as there may be circumstances where treatment of 10,000 contiguous acres would be beneficial for sage-grouse.'' The BLM considered the references provided and determined that no changes were needed to the Verification Report or the CX language.

Comment: The BLM received comments that requested the CX be modified to include seeding of non-natives, the application of herbicides, and chaining (a method of vegetation removal that involves two tractors pulling heavy chains in a ''U'' or ''J'' shaped pattern to pull over and uproot trees), given that many projects completed in the area relied on these methods and were evaluated in EAs that reached Findings of No Significant Impact (FONSIs), and therefore could support establishment of this CX as including these methods. The BLM received comments that provided several scientific references noting the benefits of these actions and requested that the BLM modify the scope of the CX.

Response: The BLM considered suggestions to allow for the use of seeding of non-native species, the use of herbicides, and chaining, and determined that these actions would not be added to the CX, for the same reasons they were not included in the proposed CX, as described in the Verification Report. The Methods section of the Verification Report (under 1.B.b) states ''actions that were proposed for the CX as a preliminary matter were eliminated if they were not supported by NEPA analysis. This means that if the type of treatment and activities were not analyzed as elements of the projects listed in Table 1, they were removed as a covered action in the CX.'' The use of non-native plant seeds or sources and chaining were not analyzed as elements of the projects evaluated in the EAs reviewed. In addition, as noted in the same section of the Verification Report, ''[a]ctivities such as the construction of temporary roads and the application of herbicides or pesticides that were rarely proposed in the EAs and, therefore, had no comprehensive record of effects across projects, were also removed from the CX.'' Therefore, these activities are not included within the scope of this CX.

Comment: The BLM received comments that requested that, in addition to PJ, the proposed CX should also include Douglas fir and limber pine in its treatment of conifer encroachment if the CX aims to improve mule deer and sage-grouse habitat on a broad scale.

Response: Establishing a CX requires that the BLM evaluate the environmental impacts of the types of action proposed for the CX to determine if there is evidence that such action normally does not result in significant impacts across all landscapes where it would be appropriate to apply. The Verification Report documents the findings from BLM EAs and research that support the removal of PJ as a category of action that normally does not result in significant effects. At the time of developing this CX, the BLM was only able to find one EA in one ecoregion that evaluated the removal of Douglas fir in conjunction with PJ to support mule deer and sage-grouse habitats. The BLM determined that the one EA representing one ecoregion did not provide sufficient information at this time regarding the impacts of removal of Douglas fir or limber pine for the benefit of mule deer and sage-grouse habitat across multiple landscapes that justify including activities removing these species in the CX. Therefore, the BLM did not include removal of these species in this CX.

Comment: The BLM received comments that requested language be added to the CX stating that it may not be used within certain specially designated lands, as values protected under these designations would be compromised by projects implemented on the basis of the CX. The comments pointed to the National Landscape Conservation System and other specially designated areas, including National Scenic and Historic Trail (NSHT) rights-of-way. The comment further stated that, without excluding NSHTs, projects would be in direct contradiction with the policies for the management of the NSHTs.

Response: The BLM has determined it is not necessary to explicitly exclude special designations in the text of the CX. PJ vegetation may require management in areas both within and outside of specially designated areas; therefore, the BLM intends the CX to extend to these areas generally, and to non-specially designated public lands. Management of specially designated areas, like all public lands, is governed by LUPs. The LUP applicable to a specially designated area will help define the applicability of the CX by delineating what kinds of protective measures, such as visual resource management buffers, are in place and what desired resource conditions constrain the projects in that area, which ensure compliance with BLM

policy and management direction. Should the BLM rely on this CX for NEPA compliance, this reliance must include documentation regarding these protective measures, to ensure both LUP conformance and suitability for reliance on the CX. Reliance on the CX would also be subject to review of the DOI's list of extraordinary circumstances. If such extraordinary circumstances were present, the BLM would consider whether there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects such that it may still apply the CX, or determine that preparation of an EA or EIS is appropriate.

Comment: The BLM received comments that recommended the BLM incorporate changes to the language pertaining to old-growth woodlands in the CX to require specific detection and evaluation methods, provide stronger protections, and provide an exemption for the removal of predator perches.

Response: As stated in the Verification Report, old growth trees would be protected (not removed) during projects supported by the CX, and so there are no stronger protections to provide. It would not be appropriate for the BLM to require specific detection and evaluation methods for identifying old-growth trees; instead, the BLM would continue to utilize the best professional scientific methods available and appropriate to the site-specific location at the time of project implementation. The BLM is not aware of information that supports an exemption to allow removal of predator perches and has not revised the CX to identify any such exemption.

Comment: The BLM received comments that requested additions or modifications to the CX parameters in order to prevent two CX-supported projects from being applied contiguously, in order to prevent large swaths of land being treated in multiple projects.

Response: The BLM has determined it unnecessary to define in the CX a prohibition of the use of this CX for NEPA compliance in any geographical or temporal scope in relation to additional uses of the CX. The use of any CX is subject to review of the DOI extraordinary circumstances in order to determine if any extraordinary circumstances are present that would result in significant effects and, therefore, preclude use of the CX to comply with NEPA. An established CX category of actions do not have significant impacts when projects are designed to the specifications of the category and review of the proposed action determines that there are no extraordinary circumstances present that may result in the project having significant effects. If the proposed action, conducted adjacent to other similar projects, would trigger any of the extraordinary circumstances, the BLM would not be able to rely on the CX for NEPA compliance absent circumstances that lessen the impacts or other conditions sufficient to avoid significant effects. Where extraordinary circumstances are present, and there are no circumstances that lessen impacts or other conditions sufficient to avoid significant effects, the BLM would proceed with the appropriate level of NEPA review other than a CX, in accordance with 40 CFR 1501.3 and 43 CFR 46.205. For example, the effects of contiguous PJ treatments may fall under the extraordinary circumstance that considers whether the project may ''have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks'' (43 CFR 46.215(d)).

Comment: The BLM received comments that requested additions or modifications to the CX parameters to specifically require limitations related to pinyon jay colonies, soil erosion, and biological soil crusts.

Response: The BLM considered each of the suggestions regarding additions or modifications to the CX parameters and determined that no changes were needed. Proposed actions, regardless of their level of NEPA review (CX, EA, EIS) must conform to the approved LUP. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. If the proposed action is the subject of an EA or EIS, the EA or EIS evaluates the project including those parameters. If the proposed action designed to meet the requirements of the LUP, including incorporating any resource protective measures, also meets the parameters of the CX, and no extraordinary circumstances preclude application of the CX, the BLM can rely on a CX. Because LUPs are, themselves, region-specific, different LUPs have different objectives, and impose different resource management constraints on actions that can be taken in the area they cover.

CX Purpose

Comment: The BLM received comments that requested the BLM expand the list of species that could be benefited by projects under the CX and highlight the other ecological benefits associated with PJ management in the Verification Report, such as watershed hydrologic function, expansion of herbaceous forage production, benefits to sagebrush-obligate songbirds, and increased plant diversity. The comments included several scientific references noting these other ecological benefits and requested that the BLM consider these references in determining the appropriate scope of the activities included under the CX.

Response: The BLM considered each of the requests and determined that no changes were needed to the Verification Report or the CX language. While authorizing projects covered by this CX may have incidental benefits to other species and resources, the purpose of this CX is to streamline implementation of projects to benefit mule deer and sage-grouse habitats, as directed in Secretary's Order 3356.

Comment: The BLM received comments requesting that the BLM specify that the CX applies only to specific PJ tree species described by the relevant land use plan.

Response: The BLM is not relying on LUPs to define the tree species included in the scope of this CX. The text of the CX states that it is only available for use of the removal of PJ species. In the CX as finalized, the BLM has addressed the relationship between proposed actions and LUPs in paragraph 1(b) of this CX to ensure project design features are identified as appropriate and in conformance with the applicable LUP. As stated in the Introduction of the Verification Report, regardless of the level of NEPA review, the BLM's actions are guided by LUPs on BLM administered public lands. The LUPs identify where and under what conditions management activities can occur consistent with plan decisions. Therefore, regardless of the terms of any particular CX, the proposed action would also be constrained by any limits written into the applicable LUP. For example, if a BLM LUP prohibits the removal of certain species of PJ, any proposed action would preclude such removal and reliance on this CX would not be appropriate. The BLM has revised paragraph (b) of the CX to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Comment: The BLM received comments that stated the BLM already has an established CX that meets the stated purpose of this proposed CX (DM Part 516, Chapter 11.9, Section D (10)) and under this existing CX, projects other than prescribed burning are

limited to 1,000 acres in size and are not permitted in wilderness areas or wilderness study areas. The BLM received comments that stated that the BLM has not acknowledged this existing CX or explained why this existing CX is not adequate.

Response: The comments are correct that there is a CX listed at DM Part 516, Chapter 11.9, Section D (10) that addresses certain vegetation management activities. However, under guidance issued in 2009, in BLM Instruction Memorandum No. 2009–199, use of that CX by the BLM has been discontinued permanently, as agreed to in a settlement of *Western Watersheds Project* v. *Lane,* No. 07–cv–394–BLW by the United States in U.S. District Court for the District of Idaho in July of 2009.

Site-Specific Considerations

Comment: The BLM received comments that the BLM should only allow Phase III removal treatments on a case-by-case, site-specific basis, given that state and transition models demonstrate more risk than reward with Phase III removal. These comments further recommended the BLM exercise caution prior to allowing these treatment types, keeping in mind that, in order to benefit sage-grouse and potentially avoid creating ''biological sinks,'' all trees within the treatment perimeter would need to be removed.

Response: ''Phase III'' referenced by the comment is the most advanced stage of PJ woodland encroachment into formerly sagebrush-dominated habitat. As defined in the Glossary of the Verification Report, Phase III woodlands are characterized by trees comprising over two-thirds of cover in biomass, with the tree canopy dominating ecological processes. The EAs relied upon in establishing this CX, described in Appendices A and B in the Verification Report, included PJ removal in all three phases of PJ encroachment (Phases I, II, and III). Projects authorized in reliance on this CX for NEPA compliance must demonstrate a benefit to sage-grouse or mule deer habitat. If, based on site-specific conditions, the BLM finds that a Phase III removal meets all the necessary requirements for the use of this CX (meets the scope of the proposed CX, was designed specifically for the purposes of benefiting sage-grouse or mule deer and habitat, focuses solely on removed PJ, is in conformance with relevant LUPs, and no extraordinary circumstances preclude application of the CX), then use of this CX for NEPA compliance to authorize the removal would be appropriate.

Comment: The BLM received comments stating that the BLM's statutory obligation to comply with any governing LUP is not sufficient to ensure there will be no impacts. Comments stated that site-specific analysis must be applied to PJ removal projects, and that the BLM must ensure that proper constraints are explicit in the CX language itself, rather than relying on LUP conformance requirements to constrain the use of this CX.

Response: Although any actions taken by the BLM must conform to the applicable LUP, the BLM has not relied on requirements for actions to conform with LUPs in establishing this CX. The BLM has developed a specific scope of actions and required components for the inclusion of project design features consistent with LUP decisions and relied upon existing NEPA analysis and scientific research to determine that this scope is appropriate to ensuring no significant effects would occur. The establishment of a CX does not imply that no effects would occur—indeed, the purpose of the proposed actions covered by the CX is to have a beneficial effect on mule deer and sage-grouse habitats. The scope of the CX is defined to identify parameters that constrain the action such that it would not result in significant effects. Reliance on the CX would also be subject to review for extraordinary circumstances that, if present, would preclude reliance on the CX for a particular project approval.

In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. The BLM defines and refines the action proposed regardless of the level of NEPA compliance, including for projects supported by CXs. The BLM develops LUPs for specific regions of the country in coordination with a public engagement process. These LUPs vary based on the environmental conditions and objectives for the region. Therefore, while the proposed CX points to the category of project design feature to include, the applicable LUPs, which BLM would consult during project implementation, provide regionally appropriate and site-specific design features for resource protection for individual projects proposed. The Verification Report evaluated previously implemented actions that incorporated project design features according to management direction in the relevant LUP and found that those projects do not cause significant environmental effects. The BLM has revised the text of the CX at paragraph (b) to clarify that a proposed action covered by the CX must include project design features providing protections consistent with the decisions of the applicable LUPs.

Use of the CX

Comment: The BLM received comments stating that the CX could be misused to increase forage for livestock grazing operations and requested that the BLM add language to the CX restricting projects where livestock grazing is permitted. In addition, the BLM received comments that suggested the BLM analyze grazing management in the Verification Report and the effects of grazing (such as an increase in cheatgrass and damage to biological soil crusts) on the habitat restoration goals that are the purpose for establishing the proposed CX. The comments provided several scientific references noting the effects of grazing and recommended that the BLM consider and incorporate the relevant scientific references documenting these effects in the Verification Report.

Response: Projects authorized in reliance on this CX for NEPA compliance must demonstrate a benefit to sage-grouse or mule deer habitat, not livestock. If, based on site-specific conditions, the BLM finds that the proposed action is designed specifically for the purposes of benefiting sage-grouse or mule deer and habitat, focuses solely on removal of PJ, is in conformance with relevant LUPs, and there are no extraordinary circumstances requiring preparation of an EA or EIS, then use of this CX for NEPA compliance to authorize the removal would be appropriate regardless of whether increases to livestock forage occur as a result.

The BLM analyzed and considered the effects on grazing management of PJ treatments. Appendix A and Appendix B of the Verification Report describe the anticipated effects of PJ treatments described in the EAs used to support the CX, which included (1) temporary loss in areas available for livestock grazing, (2) short-term decreases in forage availability, (3) long-term minor improvements in forage availability, and (4) loss of shade trees that could concentrate livestock. These effects were not anticipated to be significant, and after-action observation revealed they were not. As noted in Appendix B of the Verification Report, removal of livestock grazing is usually not required as part of PJ removal treatments unless site-specific protection is needed for seedings, revegetation, or where

required by land use plans. Other design features to reduce the effects on livestock grazing, if needed, typically include pasture deferments or modifications to grazing systems. Due to limited vegetation and soil disturbance caused by these PJ management projects, described in the Methods sections 1.B(f) and 2.A(d) of the Verification Report, these measures adequately provide for post-treatment recovery in areas subject to livestock grazing.

Analysis and Review of the CX

Comment: The BLM received comments that the BLM has not demonstrated that it has adequately monitored past vegetation removal projects to ensure that the treatments do not cause significant, long-term damage to overall ecosystem health. Comments stated the Verification Report did not include adequate detail regarding how the BLM collected and analyzed information and data related to the 18 EAs relied on in the Verification Report to support its conclusions.

Response: The BLM engages in routine monitoring, either for specific projects or as part of overall land health monitoring, to evaluate the effectiveness of projects. Providing separate compilations of detailed monitoring data for the projects identified is one possible way to support establishment of a CX but is not necessary to justify the establishment of this CX. The Administrative Process section of the Verification Report describes the methods by which an agency can establish a CX, and the introduction to the Methods section describes the methods BLM employed to validate this CX. These included (1) evaluating effects of implementing PJ removal projects for which the BLM prepared EAs and FONSIs, and (2) reviewing scientific literature and citing research findings from peer-reviewed published studies.

Comment: The BLM received comments that the BLM failed to analyze the cumulative impacts of the proposed CX, because the BLM did not include its methodology or any quantified results supporting its conclusory statements in the Verification Report. The commenters requested the BLM assess cumulative impacts on a programmatic level and ensure that impacts are assessed at a level of detail such that useful data can be generated to facilitate review.

Response: Commenters are conflating the analysis required when a CX is established with the consideration required when an agency relies on an established CX to support a proposed action. In its updated regulations, CEQ requires agencies to identify all effects of a proposed action that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. In evaluating effects of PJ treatments, the BLM examined data and evidence per the CEQ's guidance for establishing a new CX, including analyzing previously implemented actions and their observed environmental consequences. In so doing, as documented in the Findings section of the Verification Report, based on effects analyses in the relevant EAs and post-implementation monitoring, ''[n]o [significant impacts] were predicted in the BLM EAs and FONSIs for the activities included in the proposed CX for PJ control, the observed post-implementation effects were similar to or less impactful than the effects predicted in the EAs/FONSIs, and there were no unanticipated impacts from the treatments.'' Based on the evidence, the specific category of actions described in the CX consistently do not produce significant environmental impacts, and the BLM considered and analyzed potential effects from PJ treatments in the Verification Report.

Comment: The BLM received comments that stated that the BLM failed to analyze the potential for large-scale removal of pinyon trees within a PJ woodland to create juniper-only communities. The comments referred to a scientific source noting the effects of PJ removal and subsequent alteration of PJ communities and recommended that the BLM consider and incorporate its results in the Verification Report.

Response: In conducting its review and analysis to establish the CX, the BLM considered large scale removal of PJ and possible alteration of PJ communities. The BLM reviewed the scientific source submitted with comments regarding possible transformation of PJ communities and found that the scientific source cited is specific to chaining treatments and treatments that have been reseeded using non-native species, neither of which could be authorized under the CX. The proposed CX language in the Verification Report (section 1(1) under the Introduction) specifically states that covered actions under the CX ''shall not include: (a) Cutting of old-growth trees; seeding or planting of non-native species; chaining; pesticide or herbicide application; broadcast burning; jackpot burning; construction of new temporary or permanent roads; or construction of other new permanent infrastructure.'' Therefore, the cited information, with its focus on chaining, is not relevant to the establishment of this CX.

Comment: The BLM received comments that the BLM failed to include in the narratives in the Methods section of the Verification Report the effects on soil erosion and biological soil crusts, even though those effects appeared in Appendix A, and stated that the discussions of scientific literature provide conflicting summaries from the sources cited regarding soils.

Response: Section 1.B.f (''Observed environmental consequences of projects as implemented—Soil Disturbance'') under the Methods section of the Verification Report presents actual effects observed on the ground after project implementation, whereas Appendix A lists the potential effects as described in the Environmental Consequences sections of the EAs relied upon in establishing this CX. When post-implementation observations did not detect the effects, those effects were not noted, and thus would be absent from the section, as was the case with soil effects. Appendix B of the Verification Report provides a summary of predicted (potential) effects on soils noted in the EAs, followed by the validated (observed on the ground) effects, under the Soils/Vegetation section of the table. Section 2.A.d, under the Peer-reviewed scientific research findings, describes potential effects of the PJ removal methods supported under the CX on soil erosion and biological soil crusts. The BLM has reviewed the findings of Redmond et al. 2013 and determined that they are appropriately summarized in the Verification Report.

Comment: The BLM received comments that the Verification Report fails to adequately consider the potentially significant effects of the proposed CX on pinyon jays and does not adequately support its findings in the Verification Report regarding impacts on pinyon jays and PJ-obligate species from PJ removal. The comments provided scientific references noting the potential impacts of PJ removal on these species and recommended that the BLM consider and incorporate relevant scientific references documenting these effects in the Verification Report.

Response: The BLM has considered the effects of the actions covered by the CX on pinyon jays. The BLM has reviewed the findings in the scientific references provided by the comments (*i.e.,* Somershoe et al. 2020, Boone et al. 2018, and Johnson et al. 2019) and has concluded that the findings do not conclusively indicate that pinyon jays would experience significant impacts due to PJ removal treatments. As

Somershoe et al. 2020 notes, ''[t]he effects of thinning treatments on pinyon jays have been studied, but little information is available about the effects of woodland removal, especially in the Great Basin.'' The few studies cited in Somershoe et al. 2020 are site-specific and do not support a finding that pinyon jays would experience negative impacts at a landscape-scale from PJ removal. The commenter does not cite to any other references to support the stance that best available science indicates that the implementation of projects supported under this CX could have significant impacts on pinyon jays.

Comment: The BLM received comments that recommended the BLM include additional research in the Verification Report to better encompass the benefits of PJ management for big game species, specifically, research highlighting the need to focus on forage and nutrition, not thermal cover, for elk management, and research demonstrating that treatments to remove PJ in sagebrush/sage-steppe systems would greatly improve forage for big game, including Cook et al. 1998; Cook et al. 2005, Sorensen et al. 2020, Roerick et al. 2019, and Maestas et al. 2019.

Response: The BLM's review of the scientific literature provided by the commenter supports the BLM's finding in the Verification Report that forage abundance and availability for mule deer is considered to be an equal, if not more important, indicator of the quality of winter range for big game than thermal and hiding cover. Likewise, the beneficial effects of PJ removal to other big game species, including elk, are discussed in the Verification Report. Therefore, the BLM has made no changes in the Verification Report relative to this comment.

Comment: The BLM received comments indicating that, by citing regional unpublished habitat guidelines and studies (specifically Watkins et al. (2007) and Cox et al. (2009)) to generalize the entire array of ecosystems managed by the BLM nationwide, the BLM is not consulting the best available science.

Response: The mule deer habitat guidelines (Watkins et al. 2007; Cox et al. 2009) are based on a substantial number of peer-reviewed mule deer studies, Ph.D. dissertations, and M.S. theses, and state agency verification reports from across a wide geographic area in the Colorado Plateau and Intermountain West. In addition to these guidelines, the BLM reviewed and has relied upon recent published literature, such as Jones (2019) and Miller et al. (2005), as described in the Verification Report (section 2.A.c, Mule Deer). The BLM finds that these represent the best available science.

Comment: The BLM received comments that most western Native American Tribes rely heavily on pinyon nut harvests and other use of natural resources on public lands, and reliance on large-scale CXs concerning mechanical reduction or elimination of such resources without an opportunity for public review and comment on such actions as is provided through the EA process ignores the potential adverse effects on Native American communities and people and the associated environmental justice concerns.

Response: The BLM has considered the issues raised. As stated in the Verification Report, while Tribes are generally supportive of PJ treatments for the restoration of ecological health and reduction of the risks that catastrophic wildfire presents to cultural resources, the BLM acknowledges in the Verification Report that there are potential risks to cultural resources from PJ treatment projects. These risks would be substantially reduced by requirements to conduct field inventories/surveys, consult with Tribes and state and Tribal historic preservation offices, and implement appropriate impact avoidance and minimization measures. These measures are often referenced in applicable LUPs, and even when they are not, compliance with legal requirements such as the National Historic Preservation Act (NHPA) and the Federal Government's requirements for government-to-government consultation apply to all BLM projects independent of requirements for compliance with NEPA. The importance of pinyon nut harvests to Tribal interests would be addressed at the time of project proposal, regardless of the level of NEPA review completed. Common project design features include full-avoidance or restricting treatment methods to hand-treatment only within and adjacent to sites and measures that mask cultural sites and preclude physical intrusion. In some areas, cultural sites coincide with the presence of old-growth timber, areas that could not be disturbed in projects supported by the CX.

For the establishment of CXs, the CEQ NEPA regulations require consultation with CEQ and publication of the proposed CX for comment, as the BLM has done here. *See* 40 CFR 1507.3(e)(2). CEQ does not require any public review for the application of a CX to a proposed action once the CX has been established. Although public involvement is not required to determine that a project qualifies for a CX, the BLM NEPA Handbook does identify that the BLM can elect to involve the public when relying on a CX to support an action. The BLM also notes that many public land management programs administered by the BLM, such as land tenure adjustment and public land grazing management, have their own independent public involvement requirements.

Comment: The BLM received comments that the failure to consider carbon sequestration in PJ forests and the potential for loss of the carbon if the forests are removed invalidates the BLM's claim that there are no significant environmental impacts from the management activities that could be supported by the proposed CX. Comments note that removing tens of thousands of acres of public forests, if not hundreds of thousands of acres, could greatly increase carbon emissions and thus climate change impacts. The comments provided scientific references noting carbon sequestration benefits and the value of vegetated land uses in storing carbon.

Response: The BLM has considered the effect of covered projects on carbon sequestration and greenhouse gases. The PJ removal projects evaluated in the EAs and after-action observation relied on to validate the CX were of similar or greater acreages than the 10,000-acre CX limit and neither the EAs nor the after-action observation identified that these projects would or did result in significant effects on carbon sequestration and greenhouse gases. Furthermore, the scientific references provided in the comments offered no specific evidence that PJ removal projects caused significant effects on carbon sequestration and greenhouse gases. Therefore, the BLM has considered the potential effects of carbon sequestration during the validation process for this CX.

Comment: The BLM received comments that the Verification Report referenced water in the professional opinions sections (Appendices B and C) under Methods (section 1), but not in the section with *Peer-reviewed research findings, professional opinions and reports* (Methods section 2), specifically, information about the benefits of PJ removal for improving the quantity of water on the landscape. The comments provided several scientific references noting these benefits and recommended that the BLM consider and incorporate relevant scientific references documenting these effects in the Verification Report.

Response: The BLM has reviewed the scientific studies submitted by the

commenters and has included updates in the Verification Report (section 2.A.f.), summarizing the findings in Ochoa et al. 2019 and other research studies (Kormos et al. 2017, reviewed in Miller et al. 2019 and Williams et al. 2019) indicating that western juniper control can increase water availability.

Comment: The BLM received comments that the Verification Report does not adequately analyze the potential impacts of PJ treatments on bat species (including BLM-identified sensitive bat species, such as the fringed bat) and does not sufficiently incorporate data suggesting the importance of PJ habitat to bat species. The comments provided several scientific references noting the importance of PJ habitat for bat species and the potential effects of PJ treatments on bat species and recommended that the BLM consider and incorporate relevant scientific references documenting these effects in the Verification Report.

Response: The BLM analyzed the potential impacts of PJ removal on wildlife species, including bat species, in the EAs used to support the CX, and found that the activities proposed to be covered by the CX would not cause significant environmental effects on these species. The projects included identification of habitat within the project areas for BLM sensitive species (which include many bat species), the northern long-eared bat (a species listed as Threatened under the Endangered Species Act), and other bat species. Where potential habitats were identified in the project areas, the BLM conducted surveys for bats as indicated by LUP management direction and BLM protocols.

The analyses recognized that some bats utilize cavities in snags and forage for aerial insects over PJ and sagebrush woodlands, and therefore, juniper reduction would negatively affect some species (*e.g.,* the silver-haired and long-legged myotis) and positively affect other species (California and hoary bats) depending on their habitat needs. Over the long term, analyses concluded that the reduction in fuel loads from PJ removal would be beneficial by reducing the risk of future large-scale wildfire. None of the EAs identified the potential for significant effects on bats. When implementing projects covered by this CX, the BLM will conduct the same types of inventories and provide protections for bats, like other wildlife, as required by LUPs and BLM protocols for federally listed and BLM sensitive species. Since the EAs themselves documented scientific literature on bats, including the reference provided by the commenter (Chung-MacCoubrey 2005), as well as many other wildlife species, the BLM did not update the Verification Report.

Comment: The BLM received comments that suggested the Verification Report's analysis of the potential for invasive plant species expansion after PJ treatment is unsubstantiated, saying, for example, that the Verification Report inaccurately determined that cheatgrass always decreases over time, even if it initially increases post-treatment, despite none of the studies cited in the Verification Report supporting this conclusion. The comments provided several scientific references noting the effects of PJ removal on cheatgrass and other invasive species and recommended that the BLM consider and incorporate relevant scientific references documenting these effects in the Verification Report.

Response: The Verification Report acknowledges that the ''literature indicates that PJ removal activities often increase the abundance of invasive annual grasses, with cheatgrass being a focus of much of the research'' (Methods section 2.A.b), and ''that with the current level of understanding, the advance of invasive species, whether pre-existing or new, may be an outcome of PJ treatment'' (Findings section). The Verification Report discusses the complex relationships among treatment types, site conditions, pre-existing vegetation composition, and vegetative outcomes from PJ removal in section 2.A.a and focuses on invasive species research results in section 2.A.b, many showing increase of cheatgrass after treatments. The Findings section of the Verification Report concludes that after the types of PJ treatments in the CX, ''native sagebrush and sage-steppe vegetative composition and forage production improve despite the presence of invasive plant species.'' The BLM considered the references provided, many of which were used in the Verification Report, and determined that the Verification Report analyzed the issues brought up by the comments.

Comment: The BLM received comments that the Verification Report inaccurately determined that understory plants predominantly increase after treatment, and the BLM failed to consider several scientific references that came to different conclusions in determining the appropriate scope of the CX. Comments also pointed to the concept of site resistance and resilience (Chambers et al., 2014) and stated it contradicts the conclusion that native vegetation and forage production improve despite the presence of invasive plants.

Response: The BLM recognizes that while outliers may exist in the larger body of scientific knowledge, the BLM accurately depicted the results of the research in that the literature focused most clearly on the types of mechanical PJ removal covered by the CX and the effect on understory vegetation. The BLM reviewed the literature and citations included with the comments and determined that some readers may have misinterpreted results when cheatgrass was observed to increase at the same time as native plants. To clarify, cheatgrass and other non-native plants often increased at the same time as more desirable native plants, as documented in section 2.A.b of the Verification Report, but that result does not contradict the benefits of and the literature's conclusions that ''an increase in understory cover and density, including increased richness and cover of perennial and annual grasses and native forbs'' occurs after PJ treatments. These findings of post-treatment vegetation responses do not contradict the concept of site resistance and resilience, which looks at pre-treatment conditions to predict vegetative outcomes and is summarized in section 2.A.b the Verification Report: ''researchers have increasingly noted that perennial native herbaceous species are a primary determinant of site resilience to disturbance and management treatments or resistance to cheatgrass and exotic forbs under some site conditions.'' The comments do not specify why this concept invalidates the scientific research results cited in the Verification Report. The BLM carefully reviewed the literature evaluated in the Verification Report to find the results of the specific PJ removal treatments covered by the CX, discrete and distinct from the results of burning, chaining, or cabling, which are not included. Therefore, the BLM accurately summarized the scientific literature cited in the Verification Report relative to understory vegetation and found no reason to change the scope of the CX or revise the Verification Report.

Comment: The BLM received comments that the Verification Report inaccurately determines that the overwhelming result of PJ treatments is that they have positive effects on soils, soil erosion, and hydrological function, and noted that research shows that PJ forest ecosystems are complex and depend on the interaction of a variety of factors, and management must be carefully planned according to individual site characteristics on a site-specific basis. The comments provided

a list of literature citations for the BLM's review and consideration in support of their statements.

Response: The BLM has reviewed all literature provided by the commenters. The BLM acknowledges that PJ forest ecosystems are complex and has updated section 2.A.d of the Verification Report to add to the description of the Williams et al. 2018 summary that ecohydrological impacts of treatments on PJ woodlands largely depend on: (1) The degree to which perturbations alter vegetation and ground cover structure, (2) the initial conditions, and (3) inherent site attributes. The BLM also notes that LUPs address heterogeneity among sites.

Comment: The BLM received comments that stated the two literature reviews cited in the Verification Report improperly informed consideration of cumulative effects of PJ removal projects (Jones 2019 and Miller et al. 2019), given that these sources: Aggregate data and observations from multiple reports on individual research projects; draw generalizations from the body of research; and fail to explicitly address the cumulative impacts of many such projects in proximity across the landscape on a wider scale. Comments included several scientific references noting the cumulative impacts of PJ treatments and recommended that the BLM consider and incorporate relevant scientific references documenting these effects in the Verification Report.

Response: The revised CEQ regulations require agencies to identify all effects that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. Although CEQ's regulations specifically do not require evaluation of cumulative effects, *see* 40 CFR 1508.1(g)(3), the BLM nevertheless utilized evaluations and observations of previously implemented projects to determine the environmental effects from the activities covered by the CX to address such effects. Those evaluations and observations led to the findings stated in the Verification Report that the specific categories of actions described in the CX consistently would not cause significant environmental effects, whether the activities were to be implemented individually or in combination. The literature review supported this finding (''informed the consideration of cumulative effects'') in that the aggregated studies pertaining to specific resources (soils, vegetation, etc.) over space and time did not reveal significant effects. The BLM did not rely solely on the aggregated trend data in Jones (2019) to identify effects from the relevant PJ removal treatments. The literature review in the Verification Report presents scientific data directly from numerous research projects representing different situational circumstances, and these data provided the basis for the BLM's conclusions. One of the references provided by comments cited the results of sagebrush removal treatments, which would not occur under the CX, and is therefore not relevant to PJ removal. Based on the relevant studies focused on the PJ removal activities specified in the CX, the BLM did not find the reasonably foreseeable effects to be highly uncertain or potentially significant. The BLM has determined that its statements are supported by the scientific references cited in the Verification Report.

Comment: The BLM received comments that the BLM incorrectly summarized the findings in the peer-reviewed literature section in the Verification Report regarding the impacts of PJ removal on sage-grouse. The comments referred to several scientific references cited within Jones (2019) for PJ treatment effects on sage-grouse and recommended that the BLM consider and incorporate additional findings from these references in the Verification Report.

Response: In one of the examples provided by the comments, Jones (2019) summarized that ''[o]f the five studies of PJ treatment effects on sage-grouse, three showed positive effects and two showed non-significant effects.'' (Note that ''significant'' in this context refers to statistical significance such that ''non-significant'' conveys a neutral result.) Therefore, all five of these studies had no proven negative effects. The other Jones (2019) example provided by the comments referred to 11 studies of sagebrush treatment effects; however, sagebrush treatments (removing sagebrush) are not included in this CX, and those results are therefore not relevant.

Comment: The BLM received comments that the BLM incorrectly determined in the Verification Report that PJ mechanical treatments have variable effects on deer and elk use of sage-steppe ecosystems, given that the literature cited in the Verification Report found that mechanical treatments have a mostly negative or statistically non-significant effect on mule deer and elk. The commenter provided a list of literature citations for the BLM's review and consideration in support of their statements.

Response: In the Verification Report (section 2.A.c, Mule Deer), the BLM summarizes findings of studies cited by Bombaci and Pejchar (2016) and Jones (2019) that mechanical treatments have variable effects on deer and elk use of sage-steppe ecosystems. Notably, Bombaci and Pejchar (2016) found that the proportions of negative, positive, and non-significant results (statistically non-significant, therefore, neutral for these purposes) were similar following mechanical removal and thinning treatments. Jones (2019) concluded that ''mechanical treatments have variable effects on deer and elk use of sage-steppe ecosystems both seasonally and annually, ranging from decreased use to increased use'' and ''treatments were found to improve forage values, sometimes at the expense of cover used for other daily and seasonal needs.'' The BLM therefore concludes that its determination that PJ mechanical treatments have variable effects on deer and elk use of sage-steppe ecosystems was correct.

Comment: The BLM received comments that the BLM did not adequately evaluate the impacts of landscape-scale disturbance to PJ woodlands on wildlife species that inhabit and depend on these woodlands (including obligate bird species, semi-obligate bird species, and mammals), as well as on migration corridors and wildlife-dependent recreational activities.

Response: The BLM has considered impacts of the kinds of treatments included in this CX on PJ obligate species. The BLM has updated the Verification Report (section 2.A.c, Other Birds and Mammals) to clarify that ''Research of bird species responses to PJ removal have been relatively consistent in reporting that use of the treated areas by sagebrush-associated species increased after PJ treatments, while use by PJ woodland species, including pinyon jay nests, decreased (Johnson et al. 2018; Jones 2019).'' Relative to other wildlife-related effects, Appendix B of the Verification Report provides a summary of environmental consequences of the actions included in the CX by resource, including impacts on wildlife and recreation. The commenter does not provide any further information or scientific sources to demonstrate how the BLM failed to evaluate landscape-scale disturbance impacts from PJ removal treatments.

Comment: The BLM received comments suggesting that the BLM improperly used mitigated FONSIs to support the proposed CX and that not all project design features contained in the referenced EAs were included in the proposed CX.

Response: Consistent with CEQ's guidance, Establishing, Applying, and Revising Categorical Exclusions under

the National Environmental Policy Act (Nov. 23, 2010), mitigated FONSIs can support development of a CX when measures are included as part of the CX. The actions included in the Verification Report to support the CX were selected based on BLM's review of EAs and FONSIs that incorporate project design features developed to ensure conformance with LUPs and reduce adverse effects, which has been shown to be an effective process in developing PJ removal projects that have no significant impacts.

Comment: The BLM received comments that questioned the Verification Report's assumption that projects with NEPA completed after 2016 have not been implemented and stated that there are numerous projects where NEPA was completed after 2016 and implementation has occurred. The comments suggested that because these are more recent projects, they would be more representative of the types of projects being implemented in the future. Comments also stated that the number of projects used are not sufficient to draw a conclusion that there have been no significant environmental impacts from the actions that would be covered in the CX and requested that the BLM analyze all PJ management projects to make this determination.

Response: The Methods section of the Verification Report details the methodology the BLM used to identify the evaluated EAs. While the BLM relied on an ePlanning query of projects from 2012 to 2016, the BLM also contacted all offices with EAs analyzing the types of actions that would be covered by this CX and asked questions regarding the status of NEPA analysis and implementation status of projects for which the BLM had already reached a decision. Based on this feedback from offices, the BLM utilized information in the Verification Report only from those projects that were completed to a point that all actions authorized had been implemented, such that monitoring and observations of the effects and effectiveness of the actions were available. While the BLM found projects where NEPA was completed after 2016, implementation of these projects was not complete or was so recently completed that any post-implementation impacts were not yet observable. Although BLM did not limit the inclusion of any EAs by date, use of these criteria resulted in the most recent EAs included in the Verification Report to be dated in 2016 and prior.

Comment: The BLM received comments that the BLM should not rely on programmatic EAs to conclude that significant impacts would not result from PJ removal projects, given that programmatic EAs usually do not analyze site-specific impacts associated with future projects. In addition, comments stated that the BLM should not rely on EAs tiered to an EIS to conclude that significant impacts would not result from PJ projects implemented under an EIS, given that tiered EAs rely on the analysis, mitigations, and constraints set forth in the EIS, and therefore do not demonstrate an absence of significant impacts. Comments also stated that the BLM cannot rely on 6 of the projects included in the Verification Report because the EAs fail to demonstrate that the projects will not result in significant impacts and suggested that 12 projects are too few to provide a basis for the BLM's determination that this category of projects will not result in significant impacts.

Response: While 3 of the 18 EAs that the BLM reviewed for the CX were large-scale, programmatic analyses, the other 15 were management-unit implementation-level projects. It is important to note that the programmatic EAs did identify specific locations and specific acreages to be treated and, despite awareness that all of the areas would be treated (within the same potential timeframe), the BLM did not find any reason to prepare an EIS for potential significant effects from these treatments. Further, all projects implemented under the programmatic EAs had additional documentation of NEPA adequacy to evaluate if the effects would exceed those disclosed in the programmatic EA. All EAs evaluated in the Verification Report have supported implemented projects that demonstrate that the actions identified did not result in significant impacts at the site-specific implementation level.

Further, the Verification Report referenced EAs that analyzed activities proposed for this CX, without including the results of analyses that grouped mechanical PJ removal with other management activities (such as jackpot burning, broadcast burning, road building, etc.). None of the EAs reviewed and utilized to support the establishment of this CX tiered to an EIS analysis in order to conclude that the project would not have significant effects beyond those disclosed in an EIS.

Comment: The BLM received comments that the BLM should not have excluded those projects supported by an EIS, where potentially significant impacts were disclosed, and major issues and actions addressed are similar to those addressed in the EAs used to support the CX in the Verification Report.

Response: As noted in the Verification Report, the PJ removal projects evaluated through EISs are quite different in size and scope from the projects evaluated through EAs; most notably the EIS-supported projects encompassed far more acres or included activities not proposed for coverage in this CX, or both. Consequently, the results of the EIS analyses are not appropriately applied to the specific type and scope of activities authorized by this CX given their dissimilarity.

Comment: The BLM received comments that the actions covered by this CX are not the same as the actions analyzed in the EAs, and the Verification Report fails to recognize that the EAs addressed a number of site-specific issues (such as old-growth, roads, wilderness values, soil erosion, and impacts to wildlife) through project refinement, alternatives analysis, expert agency consultation, and mitigation. Comments concluded that the proposed CX should be updated to account for site-specific differences to ensure that PJ management does not result in significant environmental impacts.

Response: As noted in the comments, the PJ removal actions evaluated in the EAs all included some form of manual or mechanical cutting, combined with various methods of spreading or disposal of debris, including yarding and piling, pile burning or log removal, lop/scatter, and mastication with mulching. Appendix A includes a cross-reference for which type of actions included in this CX were evaluated in each EA. This process allowed iterative refining of the scope of the CX. The CX includes that suite of activities found not to have significant effects in the EAs evaluated. All projects implemented under the CX will be in conformance with the relevant LUP. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. The BLM defines and refines the action proposed regardless of the level of NEPA review, including for projects covered by CXs. Conditions that would require actions or considerations beyond those identified as within the scope of this CX would require preparation of either an EA or an EIS, as appropriate.

Comment: The BLM received comments that the BLM inappropriately relied on projects designed to be implemented over several years, given that the impacts resulting from a project

implemented in one discrete time period instead of over a multi-year phased period are different.

Response: As noted in the comments, several of the EAs and after-action observation relied on to substantiate the CX stated that implementation (treatment on all acres evaluated in the EA) may take place over a span of several years. However, the analyses for these EAs did not assume phased-in effects over time and were thus conducted as if the total proposed acreage would be implemented at the same time, as indicated by the footnotes in the Verification Report (Appendix A—Section 2). Therefore, the predicted and verified impacts from the projects analyzed in these EAs are comparable to projects that will be implemented under the CX.

Comment: The BLM received comments that the 18 projects analyzed in the Verification Report are not enough and are not representative geographically or ecologically of BLM-managed lands across the country, given that the types and intensities of impacts resulting from a category of projects may vary depending on geographic or ecological conditions. The comments also questioned the BLM's selection process for projects, noting that, in searching for PJ management projects on the BLM ePlanning website, 41 projects have a status of ''complete'' that meet the Verification Report's search criteria; however, these projects were not included in the BLM's analysis. Other comments requested adding EAs from Idaho and Nevada to better represent the range of PJ removal projects, including the Central Basin and Range area, and to include maintenance actions (not defined) that may be needed after a PJ removal project.

Response: The Methods section of the Verification Report details the methodology the BLM used to identify the projects supported by EAs to evaluate, resulting in selection of projects throughout the ecoregions where the BLM is implementing PJ removal actions. The BLM utilized information in the Verification Report only from those projects that were completed to a point that all actions authorized had been implemented and monitoring and observations of the effects and effectiveness of the actions were available. While the BLM found projects where NEPA was completed after 2016, implementation of these projects was not complete or was so recently completed that any post-implementation impacts were not yet observable. Note that while the BLM relied on a query of projects in ePlanning from 2012 to 2016, the BLM also reached out to BLM field and state office program leads to identify additional similar projects that may have been completed prior to 2012.

As stated in the Verification Report, the goal of the query process was to collect representative BLM environmental analysis information from NEPA documents for each action, in order to provide an objective assessment of the overall environmental effects from all actions proposed for inclusion in the CX across the geographic spectrum. Although the BLM did not identify any projects in the Central Basin and Range area, the BLM identified and evaluated 18 EAs representing a broad geographical range from 6 states (Arizona, California, Colorado, Montana, Oregon, and Utah) that authorized the same or similar actions to those described in the proposed CX. The BLM also included peer-reviewed research findings, professional opinions, and reports in the Verification Report that examined effects of the same or similar actions to those described in the CX from a comprehensive geographic spectrum, including studies in the Central Great Basin. In combination, the EAs and research examined in the Verification Report are inclusive of ecoregions across BLM lands where PJ removal projects have occurred and will likely occur. Relative to ''maintenance'' activities, the CX can be used for the covered activities whether the activity is considered ''maintenance'' of a prior project or not, if all criteria for using the CX apply.

Comment: The BLM received comments that the Programmatic EIS for Fuel Breaks and the Tri-state Fuel Breaks projects are not juniper treatment projects and should not be used as examples supporting this CX.

Response: The referenced EISs were not used as examples to support the CX. They were mentioned in the Verification Report only to help identify thresholds of significance in defining the scope of the CX by identifying actions and treatment sizes that were not appropriate to include in the CX terms. As the Verification Report states, the projects in those EISs encompassed far more acres and included and analyzed activities not included in this CX.

Comment: The BLM received comments that requested clarification on ''extraordinary circumstances,'' and how they are interpreted and used in the Verification Report. Specifically, the comments recommended that the BLM more clearly state the interpretation of extraordinary circumstances in the Verification Report, identify how extraordinary circumstances should limit applicability for proposed projects that take place adjacent to or in close proximity to previously implemented projects to avoid cumulative impacts (43 CFR 46.215(f)), and acknowledge that, if any of the extraordinary circumstances listed in the BLM's regulations are present, the action should be presumed to have a significant effect.

Response: The CEQ Regulations at 40 CFR 1507.3(e)(2)(ii) require agency NEPA procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis. Any action that is normally categorically excluded must be evaluated to determine whether any of the extraordinary circumstances in 43 CFR 46.215 are present;[1] if they are present, further analysis and environmental documentation must be prepared for the action. Pursuant to 40 CFR 1501.4(b)(1), agencies may categorically exclude a proposed action when an environmental resource or condition identified as a potential extraordinary circumstance is present if the agency determines that there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects. Where extraordinary circumstances are present, and there are no circumstances that lessen impacts or other conditions sufficient to avoid significant effects, the BLM would proceed with the appropriate level of NEPA review other than a CX, in accordance with 40 CFR 1501.3 and 43 CFR 46.205. For example, the effects of contiguous PJ treatments may fall under the extraordinary circumstance that considers whether the project may ''have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks'' (43 CFR 46.215(d)).

CX Establishment Procedures

Comment: The BLM received comments that stated that establishment of the new CX constitutes a ''major Federal action'' under NEPA, as it constitutes a new agency policy and procedure, and a NEPA review is required to determine whether it is ''significant.'' In evaluating the significance of the impact of establishing this CX, the BLM received comments that stated that the BLM must consider both the context of the action as well as the intensity. Another

[1] To the extent that any existing agency NEPA procedure is inconsistent with CEQ's new rule implementing NEPA, CEQ's new rule controls, unless there is a clear and fundamental conflict with the requirements of another statute. *See* 40 CFR 1507.3(a).

commenter concluded that in deciding not to prepare an environmental analysis of the proposed CX, the BLM has failed to take the obligated ''hard look'' at potential environmental impacts and is not fulfilling its obligation to comply with the procedural requirements of NEPA to the fullest extent possible.

Response: The commenters conflate the process of establishing a CX as a part of an agency's NEPA procedures with the process of conducting environmental review of a proposed major Federal action. The establishment of a CX as a part of an agency's NEPA procedures is largely administrative, and distinct from the analysis required for a proposed major Federal action. *Heartwood, Inc.* v. *United States Forest Service,* 230 F.3d 947, 954 (7th Cir. 2000) (Forest Service is not required to prepare an EA or EIS prior to promulgating a CX). In establishing the proposed CX, the Department is following CEQ's procedural regulations, which include publishing the notice of the proposed CX in the **Federal Register** for public review and comment, considering public comments, and consulting with the CEQ to obtain CEQ's written determination of conformity with NEPA and the CEQ regulations. *See* 40 CFR 1507.3(b)(2). To substantiate the proposed CX as a category of actions that do not normally have a significant effect on the human environment, the BLM also has developed the Verification Report, an administrative record to support the category of actions to be covered by the CX. This analysis includes a review of multiple environmental documents in which actions that would fall under the proposed CX have been found to not have a significant effect on the human environment.

In evaluating the significance of the impact of activities that would fall under the CX, the BLM considered the significance of such actions consistent with 40 CFR 1501.3(b).[2] The BLM properly determined that the actions covered by the proposed CX do not rise to the level of a significance that would warrant preparation of an EIS or EA to support implementation of such action. Additionally, the Verification Report documents how the BLM has experience taking a sufficiently close look at the potential impacts of actions proposed for coverage by the CX and has determined, based on this experience as well as additional evidence, that in general these impacts do not rise to the level of significance, and therefore, the BLM can rely on a CX to support taking these kinds of actions.

Comment: The BLM received comments that stated that the BLM must complete a programmatic consultation with both the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to identify the potential harms resulting from the establishment of the CX pursuant to Section 7 of the Endangered Species Act (ESA).

Response: As described in the comment response above, the administrative procedure of establishing a CX is different from relying on a CX for NEPA compliance to support a proposed action. To the extent that establishment of this CX is subject to the requirements of Section 7 of the ESA, the action has no effect on listed species or critical habitat.

Since the ESA imposes its own requirements independent of NEPA's requirements, projects the BLM may pursue in reliance on this CX to implement PJ treatments would be subject to review under Section 7 of ESA and, if the parameters of the proposed action and site-specific conditions require, appropriate consultation with the Services would occur.

Comment: The BLM received comments that stated that the importance of PJ habitat for pinyon jays is one example of an unresolved conflict under section 102(2)(E) of NEPA, and pursuant to the CEQ regulations, even if the BLM determines that it does not need to prepare an EIS per section 102(2)(C) of NEPA. The BLM received comments that stated that it ''must still prepare an EA that outlines reasonable alternatives to the proposed CX.'' The BLM received comments that provided several scientific references noting the impacts of PJ removal treatments on pinyon jays and stated that the BLM failed to consider these in determining the appropriate scope of the CX.

Response: In each case where the BLM is proposing a treatment of PJ vegetation, the BLM would need to consider the appropriate level of NEPA compliance (whether CX, EA, or EIS) to support that proposed action. If the proposed action involved unresolved conflicts, then the BLM would not be able to rely on a CX, because the presence of unresolved conflicts is an extraordinary circumstance (43 CFR 46.215(c)). In establishing the CX, the BLM analyzed the relevant scientific literature regarding the importance of PJ habitat for pinyon jays, including the references submitted, and determined that the references submitted did not substantially change the current analysis of the potential impacts of PJ treatments on pinyon jays included in the Verification Report.

Comment: The BLM received comments that stated that the BLM's proposed CX violates the limitations in relation to total acreage, use in wilderness areas, and requirements for monitoring and maintenance plans established for it through the Agriculture Improvement Act of 2018 (2018 Farm Bill), and that the BLM must be consistent with the defined limitations identified in the law.

Response: The 2018 Farm Bill CX directed by Congress is a distinct and different CX from this BLM administratively established CX. In order to establish this CX, the BLM must comply with the CEQ's requirements for establishing NEPA procedures at 40 CFR 1507.3, including consulting with the CEQ and publishing the proposed CX for comment. The BLM has followed the CEQ's *Final Guidance for Federal Departments and Agencies on Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act* (75 FR 75628, Dec. 6, 2010).

Though at a broad level, the two CXs hold similar purposes to provide for the management of mule deer and sage-grouse habitat, the BLM has developed this administratively established CX with different specific parameters to the scope of actions authorized and limitations on treatment acres and locations. The BLM considered the effects of previously implemented actions of the type proposed for inclusion in the proposed CX and the NEPA analyses prepared to evaluate the impacts of such actions. Most of these actions were evaluated in EAs, for which a FONSI was reached. The BLM established the 10,000-acre size for this CX because it was well within the bounds of acres analyzed in the BLM's EAs for which FONSIs were reached, yet is near the upper limit of what many BLM offices can plan for and treat from an operational standpoint, given their capacity (as constrained by labor and budgets). Finally, the effects of the larger projects were evaluated to be the same as those of the smaller projects. There were no differences in effects at the larger treatment sizes that would suggest further limiting the acreage of a treatment that could be conducted in reliance on the CX.

The BLM considered the effects of previously implemented actions of the type proposed for coverage by the CX and the NEPA analysis prepared to evaluate the impacts of such actions,

[2] The BLM notes that CEQ revised its regulations to move the definition of ''Significantly'' to 40 CFR 1501.3(b) and revise the provisions that formerly addressed context and intensity. *See* 85 FR 43,332.

including the impacts to wilderness values. The Department's NEPA regulations require that any action approved or authorized in reliance upon a CX established by the BLM must consider extraordinary circumstances (43 CFR 46.205 and 46.215). Therefore, the BLM would evaluate PJ removal projects for extraordinary circumstances and determine whether reliance on a CX would be appropriate. The BLM's assessment showed that there have been no occurrences where observed impacts from the types of actions included in the CX have disqualified any areas from findings of wilderness characteristics, including size, naturalness, and opportunities for solitude. Further, the BLM is required to comply with applicable wilderness and wilderness study area policies when implementing any actions in such areas.

The BLM has a robust monitoring program for terrestrial and aquatic conditions and trends across BLM-managed land. The data collected through this rigorously applied program allows the BLM to monitor the effects of the actions of the type to be included in the CX. There is nothing in this CX that precludes the inclusion of site-specific monitoring for a proposed action. The BLM can include additional monitoring parameters in a proposed action approved in reliance on this CX when it would be appropriate to do so. Furthermore, maintenance of the effectiveness of treatments or re-treatments is important and can be included in any proposed action approved in reliance on the CX.

Comment: The BLM received comments that stated that the BLM's proposed CX does not incorporate the provisions relating to the management of mule deer and sage-grouse habitat established for it through the 2018 Farm Bill, and that the BLM must be consistent with the defined actions identified in the law.

Response: The 2018 Farm Bill CX directed by Congress is a distinct and different CX from this BLM administratively established CX. The guidelines and maps referenced in the 2018 Farm Bill CX are useful tools for the BLM but are not the only means to identify mule deer or sage-grouse habitat. Under the Federal Land Policy and Management Act (FLPMA), the BLM manages the public land according to LUPs developed for specific planning areas, and all actions taken must conform to the applicable LUP. LUPs in areas of mule deer or sage-grouse habitat generally address desired conditions for these habitats and prescribe the constraints under which actions must take place to meet those conditions in the planning area. Here, any action taken, regardless of level of NEPA review (CX, EA, EIS) must be conducted in conformance with the applicable LUP (which addresses where the needs of the different habitats may conflict), and reliance on the CX requires that the project be conducted to benefit mule deer or sage-grouse habitat.

Comment: The BLM received comments that stated that the BLM's proposed CX violates the provisions of the 2018 Farm Bill by excluding actions allowed through the 2018 Farm Bill such as the use of non-native seeding, chaining, herbicide application, and temporary road construction, and that the BLM must be consistent with the defined actions identified in the law.

Response: The 2018 Farm Bill CX directed by Congress is a distinct and different CX from this BLM administratively established CX. The scope of actions included in the 2018 Farm Bill CX directed by Congress is different than the scope of actions included in this CX developed in response to Secretary's Order 3356. For example, the only element of the 2018 Farm Bill CX that allows for the use of non-native seedings is for the purpose of emergency stabilization, which is not an action covered by this CX. The other actions included in the 2018 Farm Bill CX but not the proposed CX were deemed to be beyond the scope of the agency's objectives for this CX.

Categorical Exclusion

The Department and the BLM find the category of actions described in the CX normally does not have a significant effect on the quality of the human environment. This finding is based on the analysis and information presented in the Verification Report to establish this CX. The BLM's review of the available literature demonstrates that the activities covered by this CX would not cause significant environmental effects.

As discussed in the Methods section of the Verification Report, the BLM has analyzed the effects of many PJ removal projects in EAs and has monitored post-implementation results. All associated NEPA documents were reviewed to determine the scope of environmental consequences anticipated to result from the proposed actions. There were no instances where any of the evaluated projects would have resulted in a need to complete an EIS. Often, through application of design features, environmental effects are minimized to the degree that resource issues were eliminated from further analysis due to application of these project elements. While long-term benefits of reducing fuel loading and improving sagebrush-steppe habitats (PJ treatments) are primarily beneficial, neutral, or result in no effect findings, there are documented instances of adverse, residual environmental consequences associated with implementation of these treatments. The BLM has concluded that these environmental consequences are not significant based on the EA analyses, which are summarized by resources in the Methods section of the Verification Report for soil disturbance, soil moisture, invasive plants, wildlife, PJ obligate species, visual resource, big game species, wilderness characteristics, cultural artifacts, tribal resources, air quality, and biomass. These conclusions have been validated by post-implementation observation of professional land managers.

In addition to the BLM's review of completed EAs and projects as implemented, the BLM's review of the available scientific literature demonstrates that the activities covered by this new CX would not normally cause significant environmental effects. As discussed in detail in the Verification Report Methods section, the research overwhelmingly shows that PJ removal restores ecosystem values associated with the rebound of native shrubs (including sagebrush), perennial grasses, and forbs, even when there may be a component of non-native forbs and annual grasses. Despite the expectation that annual grasses (*e.g.,* exotics like cheatgrass) often increase after PJ treatment, the current literature shows that the native plant communities reestablish after mechanical PJ removal treatments, becoming dominant (over nonnative species) either within the first growing season after treatment or within a few years.

The BLM's experience with implementing and monitoring these types of projects mirrors the scientific literature; taken together, they support establishment of this CX, providing the evidence that this type and scope of PJ removal treatment can be categorically excluded from further detailed analysis. As described in detail in the Verification Report, establishment of this new CX would not have significant impacts on the human environment, and its use, like that of other administratively established CXs, would be subject to extraordinary circumstances review.

The intent of this CX is to improve the efficiency of the environmental review process for the management of PJ for the benefit of mule deer and sage-grouse habitat. Each proposed action must be reviewed for extraordinary circumstances that could preclude the

use of this CX. The list of extraordinary circumstances under which a normally excluded action would potentially require further analysis and documentation to determine whether preparation of an EA or EIS is necessary is found at 43 CFR 46.215. If a proposed PJ management project is within the activity described in this CX, then these ''extraordinary circumstances'' will be considered in the context of the proposed project to determine if there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects, or they indicate the potential for effects that merit additional consideration in an EA or EIS. If any of the extraordinary circumstances indicate such potential, the CX would not be used, and an EA or EIS would be prepared.

Amended Text for the Departmental Manual

516 DM 11 at Section. 11.9 J. Habitat Restoration:

(1) Covered actions on up to 10,000 acres (contiguous or non-contiguous) within sagebrush and sagebrush-steppe plant communities to manage pinyon pine and juniper trees for the benefit of mule deer or sage-grouse habitats. For the purpose of this CX, habitat for mule deer or sage-grouse is any area on BLM-managed land that is currently or formerly occupied by mule deer or sage-grouse, or is reasonably likely to be occupied if pinyon pine or juniper trees are removed. Covered actions include: Manual or mechanical cutting (including lop-and-scatter); mastication and mulching; yarding and piling of cut trees; pile burning; seeding or manual planting of seedlings of native species; and removal of cut trees for commercial products, such as sawlogs, specialty products, or fuelwood, or non-commercial uses. Such activities:

(a) Shall not include: Cutting of old-growth trees; seeding or planting of non-native species; chaining; pesticide or herbicide application; broadcast burning; jackpot burning; construction of new temporary or permanent roads; or construction of other new permanent infrastructure.

(b) Shall require inclusion of project design features providing for protections of the following resources and resource uses consistent with the decisions in the applicable land use plan in the documentation of the categorical exclusion. If no land use plan decisions apply, documentation of the categorical exclusion shall identify how the following resources and resource uses are to be appropriately addressed:

(i) Specifications for management of mule deer habitat;

(ii) Specifications for management of sage-grouse habitat;

(iii) Specifications for erosion control measures;

(iv) Criteria for minimizing or remedying soil compaction;

(v) Types and extents of logging system constraints (*e.g.,* seasonal, location, extent);

(vi) Extent and purpose of seasonal operating constraints or restrictions;

(vii) Criteria to limit spread of weeds;

(viii) Size of riparian buffers or riparian zone operating restrictions; and

(ix) Operating constraints and restrictions for pile burning.

Authority: NEPA, the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*); E.O. 11514, March 5, 1970, as amended by E.O. 11991, May 24, 1977; and CEQ regulations (40 CFR 1500–1508).

Stephen G. Tryon,

Director, Office of Environmental Policy and Compliance.

[FR Doc. 2020–27158 Filed 12–9–20; 8:45 am]

BILLING CODE 4331–84–P

DEPARTMENT OF THE INTERIOR

Office of the Secretary

[LLWO210000.L1610000]

National Environmental Policy Act Implementing Procedures for the Bureau of Land Management (516 DM 11)

AGENCY: Office of the Secretary, Interior.

ACTION: Notice.

SUMMARY: Through this notice, the Department of the Interior (Department) announces a new categorical exclusion (CX) under the National Environmental Policy Act (NEPA) implementing procedures for the Bureau of Land Management (BLM) at Chapter 11 of Part 516 of the Departmental Manual relating to the harvest of dead or dying trees impacted by biotic or abiotic disturbances commonly referred to as ''salvage harvest.''

DATES: The categorical exclusion takes effect on December 10, 2020.

ADDRESSES: The new CX can be found at the web address *http://www.doi.gov/elips/* at Series 31, Part 516, Chapter 11. The BLM has revised the *Verification Report on the results of a Bureau of Land Management analysis of NEPA records and field verification for salvage harvest of timber* (Verification Report) in response to comments received; the public can review the revised Verification Report online at: *https://go.usa.gov/xvPfT.*

FOR FURTHER INFORMATION CONTACT: Heather Bernier, Division Chief, Decision Support, Planning, and NEPA, at 303–239–3635, or *hbernier@blm.gov*. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339. The FRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

Background

NEPA requires Federal agencies to consider the potential environmental impacts of their proposed actions before deciding whether and how to proceed. The Council on Environmental Quality (CEQ) encourages Federal agencies to use CXs to protect the environment more efficiently by reducing the resources spent analyzing proposals that normally do not have significant environmental impacts, thereby allowing those resources to be focused on proposals that may have significant environmental impacts. *See* 40 CFR 1501.4, 1507.3(e)(2)(ii), and 1508.1(d). The appropriate use of CXs allow NEPA compliance, in the absence of extraordinary circumstances that merit further consideration, to be concluded without preparing either an environmental assessment (EA) or an environmental impact statement (EIS) (*See* 40 CFR 1501.4 and 40 CFR 1508.1(d)).

The Department's NEPA procedures were published in the **Federal Register** on October 15, 2008 (73 FR 61292) and are codified at 43 CFR part 46. These procedures address policy as well as procedure in order to assure compliance with NEPA. Additional Department-wide NEPA policy may be found in the part 516 of the Departmental Manual (516 DM), in chapters 1 through 4. The procedures for the Department's bureaus are published as chapters 7 through 15 of 516 DM. Chapter 11 of 516 DM (516 DM 11) covers the BLM's NEPA procedures. The BLM's NEPA procedures were last updated as announced in the **Federal Register** on May 1, 2020 (85 FR 25472). The current 516 DM 11 can be found at: *https://elips.doi.gov/ELIPS/DocView.aspx?id=1721.*

The establishment of this new CX would allow the BLM to fulfill NEPA compliance requirements to authorize the harvest of dead or dying trees impacted by biotic or abiotic disturbances commonly referred to as ''salvage harvest.'' Salvage harvest can help to recover economic value from timber, contribute to rural economies,

accelerate reestablishment of native resilient forest tree species, reduce future wildfire fuel loads, and reduce hazards to wildland firefighters, the public, and infrastructure from dead and dying trees.

Description of the Change

The BLM already relies upon an existing CX (C.8) that addresses salvage harvest not to exceed 250 acres and proposed this additional CX to increase BLM's flexibility to respond to disturbances across larger areas, while keeping the tailored focus of the action. This new CX proposed to address salvage of dead and dying trees not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, the CX proposed that harvesting would not exceed ⅓ of a disturbance area but not exceed 5,000 acres total harvest. In addition, the proposed CX would have authorized no more than 1 mile of permanent road construction to facilitate the covered actions, and other activities generally associated with salvage harvest such as temporary road construction, post-harvest seeding and replanting, and prescribed burning. Moreover, the proposal included a list of project design features such as snag retention and other resource protection measures common to salvage harvest.

The BLM's proposed CX and associated Verification Report were available for public review and comment for 30 days, beginning with the publication of a **Federal Register** notice on Tuesday, June 2, 2020, and ending on Tuesday, July 2, 2020 (85 FR 33697). In response to the comments received, the BLM has revised the text of the CX as follows:

- Replaced ''harvesting'' with ''salvaging'' at the beginning of the CX.
- Revised the upper limit of the harvest size from 5,000 acres to 3,000 acres.
- Revised language at part (b)(i) regarding the wording around permanent road construction limitations to be more consistent with the wording for road limitations in existing BLM CXs for timber harvest.
- Added ''erosion control, potential sedimentation to streams'' to the list of considerations required for temporary road design in part (b)(iii).
- Revised language at part (v) to clarify the requirements for project design features to be included consistent with land use plans (LUPs).
- Removed ''and retention level of live trees'' from the list of resource uses requiring project design features under part (v).
- Added ''limitations on road uses'' to the list of resource uses requiring project design features under part (v).

The BLM has also revised the Verification Report in response to the comments received to address clarifications, incorporate new literature, and to support discussions to the changes of the CX text. The BLM also has reviewed and revised, as appropriate, the Verification Report for consistency with the updated CEQ regulations at 40 CFR 1500–1508 (2020). 85 FR 43304 (July 16, 2020).

Comments on the Proposed CX

The BLM received a total of 318 comment submissions. The BLM received comments primarily through the online comment platform, ePlanning, and by mail. Commenters invested considerable time and effort to submit comments on this proposal. Comments were submitted by State and local governments, environmental organizations, members of the timber industry, and private citizens. The BLM received comments both in support of the proposal and against the proposal, with both supportive and non-supportive comments also requesting revisions to the proposal.

The BLM has summarized and provided responses to all substantive comments received in this **Federal Register** notice for public review. The comments fell across six broad categories related to the scope of the CX, the purpose of the CX, incorporation of site-specific considerations of the CX, clarifications on the BLM's use of the CX, adequacy of the analysis and review done to develop the proposed CX, and questioning of the establishment procedures the BLM used to establish the CX. The BLM has considered all comments received and has provided responses to the substantive comments identified, below.

Scope of the CX

Comment: The BLM received comments requesting that BLM consider expanding the restriction on permanent road construction in the proposed CX from one mile to two miles to ensure a rocked road system capable of supporting log truck traffic during wet season. Commenters stated that proper road location using modern engineering standards would not pose significant impacts to the natural resources of concern and would assist in the timely harvest and utilization of fire-damaged timber.

Response: The BLM acknowledges that restricting permanent road construction to no more than one mile to facilitate the covered actions may limit certain sales that require rock road base for wet weather hauling. Road base is typically too costly to use on temporary roads and may result in either delay of harvest due to the need to wait for dry soil conditions or exclusion of some of the harvest area because there is no viable way to harvest without using rock road base. The CX includes no more than one mile of permanent road to facilitate the covered actions. This amount is consistent with, but more conservative than, the scale at which this has occurred with thinning and regeneration harvest projects, for which the BLM has regularly reached findings of no significant impact (FONSIs). The BLM chose a more conservative rate of road length to facilitate the covered actions because the BLM as a general practice strives to optimize the permanent road network through careful planning and in support of LUP implementation. The BLM will maintain the permanent road limit at one mile to facilitate the covered actions for the reasons discussed in the report.

Comment: The BLM received comments suggesting that the BLM should not conclude that construction of up to 1 mile of permanent roads to facilitate the covered actions and an unlimited number of temporary roads will have no impacts based on only one environmental analysis that allowed for the construction of 1,000 feet of a permanent road. Commenters stated that the EAs analyzed by the BLM are for green timber sales, not salvage projects, and therefore are not comparable. Commenters claimed that road construction associated with salvage harvest would result in significant impacts.

Response: The BLM does not claim that there are no impacts associated with road construction. The Verification Report describes the instances where projects containing road construction resulted in a FONSI and therefore did not require analysis in an EIS. Commenters did not provide, and the BLM has not found, any evidence that the effects of construction and use of a road are different when the road supports haul of salvaged versus green timber. The construction standards for haul roads are the same for salvage and non-salvage timber transportation. Commenters did not provide, and the BLM has not found, any evidence that the effects of salvage harvest in conjunction with road construction inherently result in significant effects. The BLM incorporates project design features related to the road design and erosion prevention to minimize road-related sediments and connection to

stream networks as directed by the applicable LUP and appropriate for the site-specific conditions within a project area regardless of the type of wood the road is expected to transport or the level of NEPA review conducted.

Comment: The BLM received comments stating that the BLM failed to explain how it arrived at the conclusion that 5,000 acres is an appropriate size from the data in the 18 EAs. Specifically, commenters stated that the EAs reviewed cover projects ranging from 14 to 8,700 acres, with an average of 1,321 acres and that only one project covered an area greater than 5,000 acres.

Response: The BLM acknowledges that only one sample EA was greater than 5,000 acres and has decided to reduce the upper limit to 3,000 acres from the proposed 5,000 acres. In response to these comments, the BLM revises the CX to read: ''. . . not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, harvesting shall not exceed ⅓ of a disturbance area but not to exceed 3,000 acres total harvest.'' This means that a 3,000-acre salvage harvest would correspond with at least a 9,000-acre disturbance area with 6,000 acres left untreated to contribute to landscape heterogeneity and post-disturbance habitat. As documented in the Verification Report, the BLM has numerous EAs that have analyzed the effects of implementing salvage harvest at or near 3,000 acres and has reached FONSIs on the effects of these harvests. The BLM has revised the report in Methods section C to further document the support of a 3,000-acre harvest upper limit based on these analyses.

Comment: The BLM received comments stating that even though BLM has placed some sideboards on the proposed acreage, noting that it can only be applied to disturbances exceeding 3,000 acres, this limitation does very little: Fires, droughts, and even infestation regularly cover areas far greater than 3,000 acres.

Response: The commenter mischaracterizes or misunderstands the acreage limitation included in the report. The acreage limitation would take effect for disturbances affecting 1,000 acres or greater. For disturbance of 1,000 to 3,000 acres, the BLM would be limited to a maximum treatment area of 1,000 acres. For example, a disturbance affecting 2,000 acres of BLM land would be limited to 1,000 acres of salvage or about 50 percent of the disturbance area. The ⅓ area limitation would be in effect for disturbances of more than 3,000 acres.

Comment: The BLM received comments claiming that the CX violates the Federal Land Policy and Management Act (43 U.S.C. 1701 *et seq.*) (FLPMA) and BLM's travel management policies because the construction of new roads requires BLM to undergo a travel management planning process under FLPMA.

Response: The scope of the CX does not violate FLPMA or BLM travel management procedures. The BLM complies with FLPMA and the associated travel management regulations and policies by designating all BLM managed lands as open, limited, or closed to off-road vehicles during land use planning (43 CFR 8342.1). These designations, as well as other LUP decisions pertaining to roads, provide the extent and limitations to which permanent roads can be established as well as any locally specific design criteria. Any permanent road established through this CX must, by policy, conform to those parameters. Neither BLM regulation nor policy requires that the BLM complete implementation-level travel management planning prior to authorizing the construction of a new permanent road.

CX Purpose

Comment: The BLM received comments noting that the Verification Report cites public and infrastructure safety as reasons why the BLM harvests dead and dying trees from areas impacted by disturbance. However, commenters noted that the BLM's proposed CX contains no limitations on the location or purposes of salvage harvest projects.

Response: Public and infrastructure safety are two of several reasons for which the BLM conducts salvage activities. The BLM utilizes salvage to meet multiple forest and fuels management objectives, economic objectives, as well as to ensure human health and safety. Regardless of the level of NEPA review conducted, the BLM would only be able to implement salvage harvest as allowed for in the applicable LUP. The BLM makes decisions to authorize or preclude salvage harvest as an action or for any purposes on BLM lands through the identification of objectives and management direction in LUPs. The BLM would utilize this CX to implement actions consistent with those LUP decisions. The BLM did not find a need to limit this CX's use to only those locations that reduce public safety risks in order to determine that the scope of actions proposed for coverage by this CX would not result in significant effects.

Site-Specific Considerations

Comment: The BLM received comments stating that categorically excluding salvage harvest projects from NEPA review will reduce public participation and will preclude the development of site-specific mitigation measures that may only be developed during the public review and comment process. Commenters also stated that the BLM inclusion of an extensive list of project design features in the text of the CX itself further demonstrates the inappropriateness of its proposal.

Response: In reviewing the EAs in the Verification Report, the BLM found that the EAs commonly copied or cited project design feature parameters from the LUP for the specific resource program as incorporated in the proposed action evaluated in the EA. Proposed actions, regardless of their level of NEPA compliance (CX, EA, EIS) must be in conformance with the approved LUP. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. If the proposed action is the subject of an EA or an EIS, the EA or EIS evaluates the project including those parameters. If the proposed action designed to meet the requirements of the LUP, including any incorporated resource protective measures, also meets the parameters of the CX, and no extraordinary circumstances are present, the BLM can rely on a CX. Because LUPs are, themselves, region-specific, different LUPs have different objectives, and impose different resource management constraints on actions that can be taken in the area they cover. Therefore, instead of presenting an exhaustive list of project design features that function as parameters for reliance on a CX, only some of which would be applicable in any particular planning area, the proposed CX identified a list of 10 categories of project design features that are required to be included in the CX's parameters to address decisions made in the LUPs. That is, while the proposed CX points to the category of project design feature to include as parameters, the applicable LUPs that would be consulted during project implementation provide regionally appropriate and site-specific design features for resource protection at the individual project site. In this way, the proposed CX ensures site-specific considerations for each project area, by

directing BLM staff where to look for the relevant parameters.

For the establishment of CXs, the CEQ NEPA regulations require consultation with CEQ and publication of the proposed CX for comment, as the BLM has done here. CEQ does not require any public review of reliance on a CX for a proposed action once the CX is established. *See* 40 CFR 1507.3(e)(2). Although public involvement is not required to determine a project qualifies for reliance on a CX, the BLM NEPA Handbook does identify that the BLM can elect to involve the public when relying on a CX to support an action. The BLM also notes that many public land management programs administered by the BLM, such as land tenure adjustment and public land grazing management, among others, have their own, independent public involvement requirements.

Comment: The BLM received comments suggesting that the BLM's reliance on LUPs in the Verification Report to justify its conclusion that the proposed CX represents a category of actions that will have no impacts is arbitrary and capricious, because relying on LUPs when implementing salvage projects under the proposed CX would not address site-specific impacts nor sufficiently protect resources.

Response: The BLM makes decisions to authorize or preclude salvage harvest, like other actions, based on the identification of objectives and management direction in LUPs. In implementing actions in conformance with LUPs, the BLM identifies project design features to define the parameters of the project, including any protective measures needed to ensure LUP conformance or to reduce adverse effects based on the site-specific circumstances. The BLM defines and refines the action proposed regardless of the level of NEPA review, including for projects covered by CXs. The BLM develops LUPs for specific regions of the country in coordination with a public engagement process. These LUPs vary based on the environmental conditions and objectives for the region. Therefore, while the proposed CX points to the category of project design features to include, the LUPs that would be consulted during project implementation provide regionally appropriate and site-specific design features for resource protection for individual projects proposed. The Verification Report identifies that the BLM has evaluated previously implemented actions that incorporated project design features according to management direction in the relevant LUP and found that those projects do not cause significant environmental effects. This compiled evidence in the Verification Report negates the claim that the CX would be arbitrary or capricious if projects were to rely on using the LUPs for implementation.

Additionally, comments incorrectly conflate a requirement in the CX for inclusion of project design features pertaining to LUP decisions to mean that the applicable LUP must specifically identify a decision related to each of the resources and resource uses listed in part (v) of the proposed CX. Specifically, part (v) of the CX does not require that the LUP include a decision specific to erosion control measures to take when conducting salvage harvest, for example. The LUP may not include such action-specific instruction but may have instead included decisions regarding erosion control measures to apply to forest management more broadly, or even erosion control measures to apply for any ground-disturbing activities within specific distances from water or otherwise have decisions which would have reasonable inference to apply to the action proposed. Further, LUPs may not include any specific erosion control measures, but instead provide decisions that instruct for the protection of water resources from erosion control but leave the ultimate erosion control measure to apply to the discretion of the decision-maker when implementing projects. Lastly, in the unlikely circumstance that there are not even generalities for the protection of resources or resource uses to be reasonably inferred to be associated with any of the 10 resources and resource uses in part (v) included in the LUP, the BLM would still need to disclose that the LUP provides no parameters to shape the scope of the proposed action related to that resource or resource use. In this circumstance, the BLM's proposed action would still be defined by the limitations established by the CX and would still require inclusion of project design features as needed to prevent significant impacts and ensure extraordinary circumstances do not preclude application of the CX. The BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Use of the CX

Comment: The BLM received comments stating that the CX does not restrict CXs from being applied contiguously, resulting in far larger salvage harvest areas than the CX limits when utilizing this CX for NEPA compliance. Commenters further stated that the application of a CX that contains insufficient sideboards or limitations regarding size and that restrict such a significant acreage will result in significant impacts.

Response: The BLM has determined the parameters of the CX have been appropriately defined to allow for the use of this CX for NEPA compliance without significant impacts. The BLM has determined it unnecessary to define in the CX a prohibition of the use of this CX for NEPA compliance in any geographical or temporal scope in relation to additional uses of the CX. The use of any CX is subject to review of the Department's extraordinary circumstances in order to determine if any extraordinary circumstances at 43 CFR 46.215 are present that would result in significant effects and, therefore, preclude use of the CX to comply with NEPA. An established CX category of actions do not have significant impacts when projects are designed to the specifications of the category and review of the proposed action determines that there are no extraordinary circumstances present that may result in the project having significant effects. If the proposed action, conducted adjacent to other similar projects, would trigger any of the extraordinary circumstances, the BLM would not be able to rely on the CX for NEPA compliance, absent circumstances that lessen the impacts of other conditions sufficient to avoid significant effects.

Comment: The BLM received comments questioning the use of Determinations of NEPA Adequacy (DNAs) to execute projects under the proposed CX.

Response: In the Verification Report, the BLM referenced the BLM's prior use of DNAs for site-specific implementation projects of the Hazard Removal and Vegetation Management Project EA, each of which encompassed a different size (in acres). The BLM provided this information to explain why that EA was not used to substantiate the size (acres) proposed by the CX. The BLM is not proposing to use DNAs to implement projects under the proposed CX.

Comment: The BLM received comments related to BLM's ability to consider local government land use policies when implementing a salvage project under a CX.

Response: The CX does not preclude the BLM from considering local government land use policies when designing a salvage harvest that would rely on this CX to comply with NEPA. Forest management on BLM managed lands, including salvage harvest, would

only occur when in conformance with the applicable LUP decisions. Often, the BLM designs forest management projects, including salvage harvest, utilizing project design features developed from a variety of sources including State forest practice standards and project design features. In addition, although reliance on a CX to comply with NEPA does not require a review and comment period, decision-makers have the discretion to solicit comments while developing a salvage harvest project, including solicitation of local government input for consideration of relevant local policies.

Comment: The BLM received comments claiming the undertaking of projects under the proposed CX would bypass BLM's obligations to comply with Executive Order 13112 (relating to monitoring and preventing the spread of non-native invasive species), the Endangered Species Act (ESA), the Clean Water Act (CWA), the National Historic Preservation Act (NHPA) (including public participation requirements of the NHPA), and other statutes.

Response: The use of a CX is a form of NEPA compliance; it is not an exemption from compliance with any applicable laws or statutes. When relying on CXs, other procedural or substantive statutory or regulatory requirements may still apply, such as Tribal consultation and consultation under the NHPA and the ESA.

Comment: The BLM received comments claiming that the BLM failed to describe or constrain the specific types of lands and land uses where the CX would be applied.

Response: Identification of where actions subject to a CX may take place is only one kind of parameter agencies use to establish a CX. The BLM elected to establish this CX with different kinds of parameters, relevant to the impacts of the actions proposed for categorical exclusion. Because the BLM manages land under LUPs that set forth the types of lands and land uses allowable in a planning area, and the BLM may only act in conformance with the applicable LUP, the LUP, not the level of NEPA review, determines where specific actions can take place. Moreover, as explained in the Verification Report, the BLM has evaluated previously implemented actions that incorporated project design features according to management direction in the relevant LUP and found that those projects do not cause significant environmental effects.

Comment: The BLM received comments asking for clarification as to whether the CX would be available to be used for commercial removal of dead and dying trees.

Response: The BLM developed this CX intending the removal of dead and dying trees to be able to be accomplished commercially. The term ''salvage'' is defined as harvest to recover economic value, and salvage harvest is the purpose for which this CX would be available for use. The BLM has revised the language of the CX to replace the word ''harvesting'' at the beginning of the CX with the word ''salvaging'' to clarify this point and to make the language of this CX more consistent with the language of the BLM's existing salvage harvest CX C.8.

Analysis and Review of the CX

Comment: The BLM received comments claiming the BLM failed to adequately analyze cumulative effects, both in terms of the combined effects of the projects that would be undertaken through the proposed CX as well as those effects added to existing CXs.

Response: Commenters are conflating the analysis required when a CX is established with the analysis required when an agency is considering application of an established CX to a proposed action. CEQ in its updated regulations requires agencies to identify all effects that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. In evaluating effects for the purpose of establishing the CX, the BLM examined data and evidence consistent with CEQ's regulations and guidance for establishing a new CX, including analyzing previously implemented actions and their observed environmental consequences. In so doing, as documented on pages 9–22 and summarized on pages 24–25 of the Verification Report, based on the effects analyses in the relevant EAs and post-implementation monitoring, no significant impacts were predicted to result from the kinds of activities covered by the CX for salvage harvest, nor were any unanticipated impacts observed after treatments were implemented. Based on the evidence, the specific category of actions described in the CX consistently do not produce significant impacts, and the BLM considered and analyzed potential impacts from timber salvage treatments in the Verification Report. The CEQ regulations for creating new CXs do not call for analysis of the effects of existing CXs. (*See* 40 CFR 1507.3). Moreover, whether the BLM applied a new or an existing CX, review nevertheless would be appropriate only with respect to the individual action.

Comment: The BLM received comments claiming that the Verification Report is inadequate and identified scientific research citing that effects of salvage harvest will vary depending on the site-specific conditions and that each large salvage logging project is unique and should require full NEPA analysis rather than a CX.

Response: The BLM's proposed CX is not a proposal for salvage harvesting but is, instead, a proposal for a mechanism by which the BLM would be able to comply with NEPA to implement proposals to salvage harvest that match the scope of the CX. The BLM agrees with the science referenced in comments that site-specific considerations, including the type and size of disturbance and management objectives for the landscape, are necessary to consider in designing post-disturbance actions the BLM would pursue. The use of a CX still requires these site-specific considerations to be part of the project's design and review through evaluation for the presence of extraordinary circumstances. This proposed CX would provide an additional method for complying with NEPA to implement salvage harvest actions when the BLM has determined salvage harvest matching the scope of the CX is appropriate.

Comment: The BLM received comments claiming that the analysis of the impacts of roadbuilding for timber salvage projects was inadequate because: descriptions of impacts were overly vague (for example, ''Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources.''); the BLM only provided total miles of road construction and not road density, which is a metric commonly used in the scientific literature to assess impacts (generally, greater than 1 mile/square mile; Karr et al. 2004; Reeves et al. 2006); and scientific literature on the impacts of roadbuilding describe effects not covered by the Verification Report (*e.g.,* Forman and Alexander 1998; Ibisch et al. 2016, 2019), including effects of roads on hydrology and water quality (DellaSala et al. 2011).

Response: The CX addresses temporary road impacts through the requirement to revegetate the road as soon as practicable after the harvest as well as the requirement to include project design features related to seasonal road use, erosion prevention, and weed prevention from the local LUP. The BLM recognizes that road density is a factor in environmental impact and has added the requirement

to include any road density parameters from the local LUP to the CX text. In some cases, LUPs preclude road building in certain areas which would constrain the use of this CX in those areas. The BLM reviewed the literature cited in the comment and acknowledges that roads have varying impacts. Some of the papers cited study roadless protected areas, which in relation to this CX is not relevant because not only is the applicable LUP for a roadless protected area likely to preclude road building, but even if it did allow this action, an extraordinary circumstances review would likely disqualify the use of a CX in certain protected areas such as designated wilderness. Karr et al. 2004 provides recommendations that would improve the condition of watersheds and aquatic ecosystems which are like the project design features that would be documented as either originating in the applicable LUP, or incorporated to address fulfillment of a desired resource condition articulated in the LUP when BLM relies on the CX. Project design features related to roads influence road impacts, and where incorporated in projects evaluated in the EAs examined for this CX demonstrated non-significant impacts.

Comment: The BLM received comments stating that the BLM inappropriately relied on smaller-scale EAs and CXs to establish and describe the impacts associated with the logging footprints proposed in the Verification Report. Comments identified that the proposed footprint would represent a twenty-fold increase in scale compared to BLM's current 250-acre CX. Comments claim that this extrapolation and its characterization as ''routine'' is counter to the scientific literature on the impacts of post-fire logging.

Response: While the BLM considered projects evaluated in smaller-scale EAs and covered by existing CXs to substantiate the new CX, the BLM does not rely on extrapolation of smaller salvage projects that were approved through the existing 250-acre CX for this CX. The report discussed salvage approved with the current 250-acre CX to demonstrate the routine use and nonsignificant impacts of salvage logging in general and to also acknowledge that some salvage projects have been analyzed through EISs. The report also contrasts the complexity and unique issues of the salvage projects supported by EISs with the types of salvage projects proposed for inclusion under this CX. To substantiate this CX, BLM relies on the fact that these types of salvage projects are routinely supported by EAs and FONSIs, and do not result in significant impacts when implemented. The BLM has reviewed the literature identified in the comments and does not find that it provides evidence related to the scope of the CX proposed. The literature provided in comments discusses ecosystem disturbance dynamics and suggests that ecosystems are adapted to certain disturbance frequencies, intensities, and distributions and can recover from disturbances within those norms, and that compounded disturbances can affect ecosystem recovery (Paine et al. 1999). It also discusses the importance of post-disturbance forest landscapes and the unique site conditions and biological legacies that occur there (Lindenmayer et al. 2008; Swanson et al. 2011; DellaSala and Hanson 2015). The BLM's report addresses the importance of post-disturbance landscape attributes and the CX design specifically provides for conservation of biological legacies and site conditions through retention of a proportion of the legacies appropriate to the resource area as well as retaining portions of the disturbance area unmanaged.

Comment: The BLM received comments stating that the BLM needs to show what habitat features are being provided and in what densities and spatial arrangements to ''minimize the impacts of salvage.''

Response: The BLM agrees with the comments that the densities and spatial arrangements of habitat features, including snags and downed logs, is important to know when implementing a salvage harvest to understand if the proposal is in conformance with the LUP and whether or not extraordinary circumstances prevent reliance on the CX. This is why the CX requires ''inclusion of project design features providing for protections of the following resources and resource uses consistent with the decisions in the applicable LUP in the documentation of the CX: (1) Level of snag and downed wood creation/retention.'' The requirement that the use of this CX to implement a salvage harvest include the project design features pertaining to LUP decisions ensures measures required by the LUP to reduce harvest impacts are defined as part of the project being proposed based on best available science for the local area. Further, the BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Comment: The BLM received comments pertaining to the statement about reducing fuels from logging (Peterson et al. 2015) but the BLM does not cite the literature showing the opposite effects (*e.g.,* Donato et al. 2006). Comments also stated that fuel loading related to snags is an exaggerated characterization of deadfall.

Response: Donato et al. 2006 measured coarse and fine fuels in plots before and after salvage logging in Douglas fir forest in southwestern Oregon. This paper finds that both coarse and fine fuels increased one year after salvage logging. The BLM acknowledges that benefits from fuels reduction post-salvage varies temporally. The BLM considered this in the report and cited other papers that show similar results. However, Donato et al. 2006 is limited to only one year of fuels measurement post-salvage, and other findings cited in the BLM report show coarse fuels in unsalvaged areas significantly increasing 10–39 years post-fire (Peterson et al. 2015) when tree survival in reburns is more likely if fuels are low. Less than 10 years post-fire when trees are in seedling and sapling size classes, they are vulnerable to even low intensity fires.

Comment: The BLM received comments that the BLM's critique of Thompson et al. 2007 in the Verification Report was unfounded, given the BLM's reliance on similar remote sensing study methods.

Response: Thompson et al. 2007 used remote sensing to compare post-fire vegetation survival in an area that had burned 20 years prior and that had both salvaged and unsalvaged areas to compare. The BLM's report acknowledged that the salvaged logged areas did not show reduced fire severity based on vegetation mortality. The BLM did not discount this finding because remote sensing was used; the methodology appears to be sound. The BLM made two points related to this study. First, the study used remote sensing which precluded a look at other severity indicators such as soil impacts. Second, the BLM report prefaced Thompson et al. 2007 by explaining that there are also successional stages, seasonal fuel-moisture conditions, and severity indicators where the reduction in coarse fuels might have little benefit. These two points acknowledge that there are circumstances where salvage logging does not have a fire severity reduction benefit. Nevertheless, as documented in the report with information from the National Interagency Fire Center and scientific literature, there are instances where high densities of snags from prior disturbance and a combination of certain fire-weather conditions can cause severe fire effects and fire behavior.

Comment: The BLM received comments which stated that the BLM failed to acknowledge research finding the potential for expanded emissions to occur as a result of increased logging and road construction under this CX.

Response: The BLM reviewed the literature noted by these comments and does not find them to support the claim raised, as they do not relate to carbon emissions that are specific to salvage harvest and associated road construction. The BLM is aware of and has reviewed scientific research regarding carbon emissions and salvage harvest and associated road construction in developing this report. The scientific research demonstrates that the carbon emissions associated with timber harvesting have several components to consider. Since the materials that would be harvested using this CX are already dead or dying, they would be carbon emission sources regardless of whether they are harvested and converted into wood products.

There has been general support for the benefits of sustainably managing forests for carbon mitigation as expressed by the Intergovernmental Panel on Climate Change in 2007. However, there are many integrated carbon pools involved, which has led to conflicting implications for best practices and policy. For instance, sustainable management of forests for products produces substantially different impacts than a focus on a single stand or on specific carbon pools with each contributing to different policy implications (Lippke et al. 2011).

Studies examining life cycle emissions of forest products and the energy used to process the materials are complex and depend on the how the material is used. The carbon emissions created by harvesting materials is generally small relative to the total processing emissions:

''Removal of merchantable wood contributes only approximately 7% to processing energy requirements, and their carbon equivalent emissions as little as 1% of the total carbon stored in the wood removed'' (Lippke et al 2011).

How salvaged wood might be used and thus its carbon storage life cycle is too speculative for the BLM to include in this analysis as well any other site-specific analysis. Furthermore, the length of time that unharvested materials left after disturbance decay and emit carbon would also require speculation on decay rates, which are affected by factors such as future temperature, moisture, and fire probability. The exact disposition of the dead and dying wood might not matter in terms of carbon emissions:

''By not removing more wood than is grown on a forest landscape basis, the forest carbon alone does not change and becomes of minor importance to the way the wood is used to reduce fossil emissions,'' (Lippke et al 2011). The BLM practices sustainable forest management (does not remove more than is grown) under FLPMA (43 U.S.C. 1701 *et seq.*) and Oregon and California Revested Lands Act (43 U.S.C. 2601).

Comment: The BLM received comments that tree mortality was overemphasized without providing any documentation that it is outside of the natural range of variation. Comments further claimed that, in forests with high tree mortality, most of the fire-killed trees are small diameter and that there remains an overall deficit of large dead trees (snags) and downed logs, especially on industrial lands that are lacking in these complex structures. Comments identified research from the Forest Service (2012) showing beetle-killed large trees play a critical role in retaining soil moisture and nutrient cycling when the needles fall.

Response: The background section of the BLM report presented empirical data on tree mortality from both insect epidemics and wildfire. The BLM did not report on whether insect-induced mortality is outside the natural range of variation. The comment does not point out a deficiency based on a lack of this discussion. Potter (2017) was cited and highlights the distribution of forest mortality during the 2013 to 2015 California drought, but the relevance of the findings in this paper was not explained by the comments. Dunn and Bailey (2016) found that tree mortality varies based by species and tree size after mixed severity fire. Although this influences the number of snags on the landscape as identified in the comment, the comment does not explain how the CX should be changed based on these findings. As explained in the report, the CX includes snag retention and coarse woody debris parameters to be addressed and documented that ensure these features are maintained for habitat during salvage harvest.

Comment: The BLM received comments arguing that the BLM has overvalued the economic returns of these timber salvage projects by overestimating the revenue generated from the timber as well as the jobs created by these projects. Similarly, comments claim that the BLM has not considered the actual costs of these timber sale projects to the environment and the costs of implementing large-scale salvaging logging. One comment cited a U.S. Government Accountability Office (GAO) report, GAO–06–097, Biscuit Fire Recovery Project: Analysis of Project Development, Salvage Sales, and Other Activities, Highlights (2006) to support these claims.

Response: The BLM did not estimate revenue as part of the evaluation criteria in the report. The BLM considers economic factors when evaluating whether to initiate a salvage project but also considers ecological and restoration goals and whether there are sufficient resources to carry out the project planning and implementation. Evaluating whether potential revenue exceeds project costs is not a prerequisite for treatment. The referenced paper examines the cost of silvicultural activities post-fire. The study examined an area with low wood value which affected its evaluation of the total economics of treatment. The BLM's CX includes large portions of what the referenced research calls non-intervention type reforestation by excluding up to ⅔ of an affected area from treatment. Reforestation practices examined in the Spanish study differ from U.S. practices (use of potted trees and hole digging). The author acknowledges that costs are context dependent and salvage is performed for other reasons than to facilitate reforestation.

The comment misrepresents the GAO finding. The GAO evaluated the Biscuit Fire salvage work done by the Forest Service. The GAO's review stated it was premature to evaluate the Biscuit Fire because ''incomplete sales and a lack of comparable economic data, among other things, make comparing the financial and economic results with the agency's initial estimates difficult.'' [1] Also, the Biscuit Fire was unique in that ''several unique circumstances affected the time taken and the alternatives it included. For example, the size of the burned area—and, subsequently, the size of the Project—complicated the environmental analysis and increased the time needed to complete and review it.'' [2] The Biscuit Fire EIS was addressed in the report and the BLM provided several reasons why the EIS does not reflect common management scenarios on BLM lands.

Comment: The BLM received comments stating that the characterization of disturbance events like wildfire and insects was problematic throughout the Verification Report, and that the BLM has failed to consider the ecological benefits of such

[1] U.S. Gov't Accountability Office, GAO–06–097, Biscuit Fire Recovery Project: Analysis of Project Development, Salvage Sales, and Other Activities, Highlights (2006), *https://www.gao.gov/new.items/d06967.pdf.*

[2] *Id.*

disturbance events in order to justify salvage logging.

Response: The BLM acknowledges in the report that disturbances provide unique habitat which is why the CX has a design parameter limiting harvest to a proportion of the disturbance area for projects greater than 1,000 acres. The claim that the CX and report did not consider the benefits of disturbances is unfounded. The comment further suggests that the salvage harvest contemplated with this CX would negate the ecological benefits of disturbance and impair early successional forest ecosystems. However, in Swanson et al. (2011), which was cited in this comment, the management recommendation for areas where the land management direction is salvaging damaged timber is ''retention of snags, logs, live trees, and other structures through harvest can maintain structural complexity in logged areas.'' This recommendation from the literature is in line with the CX as designed.

The comment also suggests the BLM report makes a false or weakly supported relationship between increasing wildfire severity and disturbance and provides several research papers that show the opposite. The BLM report does not make an overarching statement that there is a positive correlation with disturbances and subsequent wildfire severity. The BLM provides examples where empirical evidence showed negative impacts to soil and vegetation attributes from wildfire in areas with high concentrations of dead trees. In addition, the BLM report cites documents from the National Interagency Fire Center reporting extreme fire behavior with severe effects in high density snags after beetle-caused mortality. The BLM acknowledges that post-disturbance tree mortality does not assure subsequent high severity fire. Other factors, such as 1,000-hour fuel moisture, also determines intensity and severity. The BLM reviewed the citations included in the comment and acknowledges that under some conditions post-disturbance tree mortality does not increase fire severity. Nevertheless, listing fuels reduction as a potential benefit of salvage is still valid and supported by evidence.

Comment: The BLM received comments claiming that the proposal to plant and salvage in the Verification Report is unjustified and a pretense to increase salvage logging given that research shows conifer establishment post-fire has been shown to be abundant, achieving densities even greater than typically planted by federal agencies. Comments cited studies showing that replanting interrupts natural successional processes associated with complex early seral forests and either had no effect at reducing fuels or increased fuel loads.

Response: The CX included tree planting as a covered action for several reasons even though tree planting is already covered in another BLM CX. The scientific literature contains many examples where high severity fire across large areas has resulted in long-term conifer absence (Chambers et al. 2016; Welch et al. 2016). Some studies have documented higher conifer regeneration in salvage harvest and replanted landscapes compared to adjacent unmanaged areas where severe fire impacted the site's ability to naturally regenerate trees (Collins and Roller 2013; Zhang et al. 2008). The BLM relies on natural regeneration where fire severity is sufficiently low for live seed trees to have survived or the soil seed bank is still viable. In areas where post-disturbance natural regeneration is not expected or competition from non-tree species is expected to be high, the BLM uses tree planting to restore forest cover. The BLM believes replanting is necessary to restore native conifer forest after certain high severity events which is supported by the scientific literature (Zhang et al. 2008).

Comments claim that replanting interrupts natural successional processes associated with complex early seral forests. The literature cited to support this claim describes a set of conditions that affect complex early seral forest including clear-cut salvage logging (harvest all live and dead trees with no retention of biological legacies), application of pre-emergent herbicide to suppress competition for tree seedlings, and dense tree planting to establish fully stocked forest. This description does not describe the nature of salvage harvest that would occur under the CX. Herbicide use is not part of the covered actions and the CX requires retention of a proportion of the biological legacies. Planting levels under the CX can include full stocking and are often driven by LUP management direction, however planting is costly and full stocking is often not pursued unless the LUP requires it. In many cases, the BLM's planting strategy is to augment natural recovery in places where regeneration may be problematic. The CX design (*e.g.,* limit to a portion of affected area) incorporates ways to address the concerns raised in this comment.

Comment: The BLM received comments claiming that, in characterizing current fire intensity trends in western conifer forests as low to mixed severity and outside of their historic range of variability, the BLM has ignored literature showing contrary evidence of fire intensity trends.

Response: The BLM acknowledges that some western forests have not experienced a departure from their historical fire regimes as documented in the citations included in the comments. For some forest ecosystems, such as high elevation spruce in the Rocky Mountains, fire frequency is in the hundreds of years between events and fires are typically high severity in terms of tree mortality but such ecosystems are still able to recover. Research has shown that modern fire suppression has not necessarily affected certain fire regimes such as high elevation spruce forest like it has with other historically more frequent regimes. The BLM report does not suggest all fires or disturbances are outside the natural range of variability. The BLM does not use departure from the natural fire regime as a justification for establishing the CX, and the comment does not explain what relevance the cited papers have to the establishment of this CX.

Comment: The BLM received comments claiming that the BLM failed to incorporate studies regarding nest site abandonment of northern spotted owls caused in part by post-fire logging. Commenters claim that the BLM's failure to incorporate these studies demonstrate that the BLM has not fully considered the impacts of salvage harvest.

Response: The BLM is aware of and has reviewed the studies regarding the impacts of post-fire logging on northern spotted owls, including the two studies specifically raised by comments. The studies documented that northern spotted owl and California spotted owl both show strong fidelity to their home ranges after wildfire. In addition, Clark et al. (2011) showed that although owls remained in the post-fire landscape about one-third of them died noting starvation as a likely cause. In Anthony and Clark (2008), the post-fire management recommendation is to avoid ''clearcut salvage logging'' and to retain live trees, snags, and riparian buffers. These are all project design features that receive emphasis in the CX.

In addition to having considered the scientific research directly, the BLM notes the requirement that actions covered by the proposed CX must conform with the approved LUP. This coupled with the direction to document in the CX the project design features needed to ensure such conformance with a LUP ensure relevant protections

are implemented. Specific to the northern spotted owl, most BLM-administered lands that constitute the range of the northern spotted owl are under the management of the LUPs for western Oregon (2016 Southwestern Oregon RMP and Northwestern and Coastal Oregon RMP). Additionally, the Department's list of extraordinary circumstances provide that if a normally excluded action would have ''significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species,'' then further analysis and documentation would be required. 43 CFR 46.215(h)

Comment: The BLM received comments regarding the revegetation of temporary roads stating the requirements were vague and inadequate, because the measures identified do not include the need to obliterate temporary roads. The comments claimed that the BLM must use road ripping techniques and native plant seed sources to contain weed spread and cited scientific research identifying detrimental impacts to water quality and invasive species persistence when appropriate project design features are not applied.

Response: In forest management, the primary driver of erosion and sedimentation in streams is bare soil exposure. A temporary road exposes soil and can channel the runoff in ditches and on the road surface if not properly designed. Features such as outsloping and water barring ensure that water is diverted from the road surface before gaining volume and velocity. The CX requires proper design which includes erosion control features. Since bare soil is the source of erosion and sedimentation regardless of recontouring, projects that would rely on the CX would be required to ''reestablish vegetative cover as soon as practicable'' after termination of the contract to prevent erosion. The BLM allows up to 10 years for revegetation in arid regions where revegetation can be delayed by drought but where precipitation is such that erosion is less of an issue and streams are often not present. The BLM has modified the CX by requiring design standards for temporary road construction to consider erosion control and potential sedimentation to streams.

The BLM reviewed the scientific research provided by the comments and found limited applicability of this research to the proposed CX. Lewis et al. (2018) studied an area dominated by logging on private land with the use of pre-emergent herbicide after harvest to prevent revegetation before tree seedling planting. This along with other practices are not part of the actions covered in the BLM CX and are not suitable for comparison. The BLM reviewed Beyers (2004) and notes that the study examined broadcast from aircraft of nonnative grasses and straw to establish cover post-fire. This technique is an emergency soil stabilization measure that is not part of the actions covered by this CX. The BLM reviewed Balch et al. (2017) and Gelbard and Harrison (2003), which find that the existence of roads increases the probability of human-caused fires and the spread of weeds. These findings are not relevant for temporary roads which are restricted to logging use while open and closed to all travel and revegetated after completion of activities.

Comment: The BLM received comments suggesting that the definition of a ''dying tree'' in the Verification Report was vague, arbitrary, and not verifiable. A dying tree is defined in the report as ''a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgement of an experienced forest professional or someone technically trained for the work, is likely to die within a few years.'' However, the commenter identified tree mortality monitoring studies that have shown high error rates in classifying trees as dead after severe crown scorch when in fact many scorched pines flush new needles in the following spring.

Response: The BLM acknowledges that conifers can flush needles after high initial crown scorch, and notes that other studies have shown that flushing does not necessarily mean survival longer term such as five years post-fire (Hood et al. 2010). Other indicators have been developed that are more accurate than percent crown scorch such as crown kill which can be observed soon after the fire without having to wait for potential flushing. The BLM acknowledges that errors may occur when trees that appear to be dead or dying but may in fact be alive and capable of flushing are harvested as part of the salvage activity. It is not practicable for the BLM to ensure that every apparently dead or dying tree is not capable of potential survival other than by relying on various indicators. The research shows that survival rates of trees with significant damage are low relative to ones that would die, and that tree mortality can be predicted with low error rates. Given the low rates of misidentification, the harvest of a few misidentified trees would not rise to the level of a significant impact. As discussed, projects that would rely on the CX require retention of snags which may result in the retention of live trees if flushing and long-term survival occurs.

Comment: The BLM received comments that challenged the claim that trees killed by beetles increase the risk of high-severity wildfire events and, in turn, impaired stream functions. Comments identified and cited scientific literature claiming to purport the contrary, that severe wildfire increases aquatic ecosystem activity post-fire, and impairments to ecosystem resilience and stream function originate from chronic disturbance events like road building and logging.

Response: The cited material does not specifically refer to salvage harvest but rather to the generalized phenomenon resulting in changes to ecosystem species assemblages resulting from repeated disturbances and exacerbated by invasive species and trends attributed to climate change. The text of the Verification Report specifically identified in the comments is in reference to the discussion of the Gunnison EA (SW Gunnison Bark Beetle Salvage Final Environmental Assessment). That EA looked at a large area of beetle-killed trees in Colorado. The EA found that high concentrations of beetle killed trees had potential, if burned, to impair stream function through erosion and excessive sedimentation.

Comment: The BLM received comments stating that the BLM's assessment that completely removing trees in high severity burn patches would have no impact on soil erosion is counter to scientific literature.

Response: The BLM makes no claim in the Verification Report that complete removal of trees in high severity burn patches would have no impact to soil erosion. Comments appear to be referring to the BLM review of the French Fire where the BLM evaluated post-salvage conditions several years after salvage was completed and where the BLM found no significant impact to soil erosion which was verified and documented in post-harvest monitoring reports, as had been expected in the project analysis.

The BLM is aware of the literature presented in comments, which recommends the areas susceptible to surface runoff and erosion after high severity fires and disturbed by ground-based logging employ additional project design features to reduce erosion. The CX requires the BLM to include project design features developed to address LUP decisions pertaining to limit ground disturbance and erosion. In fact, each of the items listed in part (v) of the

CX have a connection to erosion prevention. As such, the scientific research provided by the commenter supports the BLM's inclusion of a requirement that BLM staff relying on the CX document how design features address ground disturbance and erosion are an effective means at reducing erosion potential. Further, the BLM has revised the text of part (v) to clarify the requirement to document how the scope of the project addresses any needed protections when no LUP decisions apply.

Comment: The BLM received comments stating that the BLM ignored the effects identified in scientific research of how logging and climate change contribute to uncharacteristic fires, as well as the finding that fuels under certain conditions are not a predictor of fire intensity.

Response: The BLM has reviewed the scientific research identified in the comments related to how logging and climate change can contribute to uncharacteristic fires as well as the finding that fuels under certain conditions are not a predictor of fire intensity and did not find that the research provided was directly applicable to salvage harvest as conducted by the BLM. The comments suggest that implementing salvage in reliance on the CX may contribute to fire severity because studies have shown that intensively managed forests that are logged exhibit higher severity fires (though it should be noted not all fire effects are included in the studies). Intensive forest management in Zald and Dunn (2018) is defined as intensive plantation forestry characterized by young forests and spatially homogenized fuels. This study contrasted forests impacted by the Douglas Fire managed by the BLM and intensively managed private industrial forest. The study found that the BLM-managed forest exhibited lower fire severity than the private forest lands. In some ways, this validates that the BLM's approach to forest management that incorporates factors that address environmental consequences. The BLM has discussed in other responses the fact that by design the CX would not produce conditions described as intensively managed forest.

The comments also suggest that conducting salvage harvest to reduce fire severity is not valid because some studies have found that fuels are not a predictor of fire severity. As explained in other responses, fuels reduction benefits from salvage depend on many factors but are still valid.

Comment: The BLM received comments suggesting that the BLM improperly used mitigated FONSIs to support the proposed CX and that not all project design features contained in the reference EAs were included in the proposed CX.

Response: Consistent with CEQ's guidance, Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act (Nov. 23, 2010), mitigated FONSIs can support development of a CX when measures are included as part of the CX. The actions included in the BLM Report to support the CX were selected based on BLM's review of EAs and FONSIs that incorporate project design features developed to ensure conformance with LUPs and reduce adverse effects, which has been shown to be an effective process of developing salvage harvest projects that have no significant impacts. As explained in the Verification Report, none of the EAs relied on in support of the establishment of the CX required mitigation to reach a FONSI in order to support decisionmaking. To the extent to which the BLM regularly incorporates design features in its projects to ensure conformance with applicable LUPs, the documentation requirements of the CX will ensure this incorporation is transparent.

Comment: The BLM received comments related to the use of EAs but not EISs in the Verification Report that questioned why the potentially significant effects identified in the EISs would not apply to projects that could be supported by the proposed CX.

Response: The BLM reviewed two EISs that included salvage harvest in the Verification Report (see report section Methods (4) for extensive description of the actions proposed under the EISs). The BLM notes in the report the complexity of the actions and issues included in the EISs that led to the analysis of those projects through an EIS are readily distinguishable from the routine salvage harvest projects that would be able to occur utilizing this CX. The BLM believes the actions proposed in the EISs clearly differ in terms of magnitude and degree of effects of the action.

Comment: The BLM received a comment related to monitoring policies claiming that the BLM lacks sufficient monitoring data to support the CX. The comment suggested that the BLM must show that predictions from past EAs/FONSIs have been reliable and that the projects have in fact had no significant impacts on the ground.

Response: The Verification Report (pages 18–19) noted that the BLM conducts contract inspections for all timber sales. Sale administration requires the BLM to regularly visit active sales to ensure implementation of the sale is occurring as required under the contract and to inspect key aspects of the implementation, such as adequacy of road construction, retention of snags of the required sizes, count, and distribution, and application of protective measures. Because of this ongoing and real-time inspection, all timber sales, including salvage, are monitored for impacts. This evidence shows that predictions from past EAs (FONSIs) have been reliable and that the projects have not had significant impacts on the ground, as summarized in the Verification Report Findings on pages 24–25.

Comment: The BLM received comment that some of the EAs evaluated in the Verification Report only reached FONSIs because the project areas included untreated areas and that since the proposed CX does not require inclusion of untreated areas, the BLM has not justified the claim that treatments can be supported by the proposed CX.

Response: The CX requires retention of untreated areas for disturbances of 1,000 acres and greater. For disturbances that cover 3,000 acres or more, the CX requires the retention of untreated areas of at least 66% and increasing as the disturbance acreage rises. The BLM examined the varying levels of retention in the EAs included in the report which showed a pattern of increasing proportion of retention as the disturbance acreage increased. The BLM believes the record supports the untreated retention parameter as being adequate to maintain the impacts below the threshold of significance by reducing the degree of the effects of the action.

Comment: The BLM received comments that categorical exclusion of salvage harvesting is not appropriate because salvage logging will set back vegetative recovery that has already started and thereby delay attainment of riparian and aquatic management objectives.

Response: The BLM examined scientific literature included in comments that found that post-fire salvage can damage tree regeneration (Donato et al. 2006). These findings showed that naturally regenerated tree seedlings were reduced one year after logging citing soil disturbance and physical burial by woody material. However, the salvage logging was delayed for two years after the fire in part due to how long it took to prepare the NEPA analysis. Other studies have indicated that delaying salvage after fire can delay recovery—particularly where

artificial regeneration (tree planting) is needed to restore forest cover (Sessions et al. 2004). In the case of Sessions et al. 2004, the management direction for the study area was maintenance of mature conifer forest for species habitat under the Northwest Forest Plan. These findings support the conclusion that if salvage is going to occur it is more beneficial in terms of vegetation recovery if the harvest happens as soon after the disturbance as possible. In addition, the findings of the BLM report showed that EAs that reached FONSIs relied on project design features already developed and widely used and not new design features developed based on findings from environmental analysis. Through the establishment of the CX, the reduction of the time taken to reach a decision supports the vegetation recovery described here.

A similar effect to vegetation recovery is likely for understory vegetation that germinates from seed post-fire and is subsequently damaged by equipment. Compaction in fine textured soils can also impede vegetation establishment. These effects were noted in the EAs in the report, but effects were limited and determined to be non-significant. Reasons for non-significance include the fact that compaction in coarse textured soil can positively influence vegetation establishment and the fact that logging equipment in the harvest area typically disturbs less than 20 percent of the forest floor.

Comment: The BLM received comments claiming that before the BLM can establish a new larger salvage CX, the BLM must prove its current 250-acre salvage CX has not incurred significant impacts and gather new data to support a larger treatment area.

Response: CXs are developed for a category of actions that have been shown through repeated environmental analysis or on the basis of other evidence to not have significant impacts. The BLM's existing 250-acre salvage CX was developed consistent with the CEQ NEPA regulations and guidance for CXs. The BLM has met its obligation under the law for the existing CX. Promulgation of a new salvage CX requires a new analysis of past actions, substantiation of non-significance, and consideration of scientific literature, which the BLM has conducted.

Comment: The BLM received comments claiming that the BLM improperly benchmarks to the CXs contained in Healthy Forest Restoration Act because these Congressionally established CXs intentionally excluded the BLM's use.

Response: The Verification Report benchmarks to the CXs included in the Healthy Forest Restoration Act appropriately. The BLM is not claiming that those CXs should be expanded to the agency's jurisdiction or trying to apply those CXs for the BLM's use in any way. The BLM developed the proposed CX based on the current management needs of the BLM and by evaluating the type, scope, and intensity of salvage projects that the BLM has routinely analyzed and conducted with no evidence of significant impacts, as described on pages 11–16 of the Verification Report. The Verification Report benchmarks, or cross-references, other CXs only to compare the general intent and scope, not to justify the promulgation of the new CX. Benchmarking actions that are comparable to the actions proposed for a new CX is one of the approaches identified by CEQ for demonstrating support of an action for categorical exclusion. The BLM has appropriately incorporated discussions of these Congressionally established CXs as required by CEQ in benchmarking in the Verification Report by noting the similarities of the: (1) Characteristics of the actions; (2) methods of implementing the actions; (3) frequency of the actions; (4) applicable standard operating procedures or implementing guidance (including extraordinary circumstances); and (5) timing and context, including the environmental settings in which the actions take place.

CX Establishment Procedures

Comment: The BLM received comments stating that while the BLM discusses a recent proposal by the U.S. Forest Service to establish a CX for ''ecosystem restoration or resilience activities,'' it ignores the fact that the U.S. Forest Service has a CX for salvage harvest similar to BLM's existing CX, which the U.S. Forest Service has not proposed to change.

Response: The BLM has reviewed the Forest Service **Federal Register** notice to establish a CX for ecosystem restoration and resilience. The BLM notes that this proposed CX does not include salvage harvest in its covered actions. The BLM has reviewed the U.S. Forest Service report and referenced it in the BLM report to highlight that they had six EAs that covered salvage harvest in their report. This information was cited to indicate that another agency has conducted environmental analysis on salvage harvest in similar forest ecosystem across the west and has found no significant impacts. Nevertheless, the BLM does not rely on this for validation of its CX.

Comment: The BLM received comments stating that the BLM is wrong to conclude that Congress intended to extend the authority established in the CXs established by Congress in the Agricultural Act of 2014 (Pub. L. 113–79), and the Consolidated Appropriations Act of 2018 (Pub. L. 115–141) to BLM.

Response: The BLM does not interpret the laws cited in these comments to apply to the BLM. The BLM does not rely on the CXs established by Congress for the U.S. Forest Service to use that directly or indirectly relate to fire risk reduction to validate this CX. The BLM highlighted these legislative CXs because of their similarity to the covered actions in the CX and because Congress has excluded like activities of equal size (3,000 acres) from further environmental analysis.

Comment: The BLM received comments stating that the scope of the CXs established by Congress in the Agricultural Act of 2014 (Pub. L. 113–79) and the Consolidated Appropriations Act of 2018 (Pub. L. 115–141) do not support this proposed CX because the public laws established CX parameters different from what the BLM is proposing.

Response: The Congressionally established CXs are independent of this CX even though there is some overlap in scope. The BLM does not rely on the CXs established by Congress to substantiate this CX; the BLM instead used the data presented in the Verification Report. The BLM notes the following similarities and differences between the Congressionally established CXs and the BLM established CX: (1) The legislative CXs apply to forests with substantially increased tree mortality due to insect or disease infestation or dieback due to infestation or defoliation by insects or disease; however the BLM CX has broader applicability; (2) the legislative CXs cover treatment of areas up to 3,000 acres; however, the BLM CX has different conditions; (3) the legislative CXs allow temporary road construction with decommissioning within 3 years, whereas the BLM CX assumes decommissioning and further requires revegetation as soon as practicable but within 10 years; and (4) the legislative CXs are restricted to wildland-urban interface or Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside the wildland-urban interface. The BLM notes that a significant portion of BLM forests fall in these categories, but this type of group selection was not a factor in the BLM CX.

Comment: The BLM received comments claiming that the establishment of a new CX requires a rulemaking, is a major Federal action

requiring analysis in an EA or EIS, is subject to the Administrative Procedure Act (APA), and subject to the Congressional Review Act (CRA). Comments expressed various requirements the BLM must undertake or remedy relative to these purported requirements before establishing this CX.

Response: The CEQ regulations do not require agencies to issue their implementing procedures as a rulemaking, and it is the Department's longstanding practice to implement NEPA in its DM. The establishment of a CX as a part of an agency's NEPA procedures is largely administrative, and distinct from the analysis required for a proposed major Federal action. *Heartwood, Inc.* v. *United States Forest Service,* 230 F.3d 947, 954 (7th Cir. 2000) (Forest Service is not required to prepare an EA or EIS prior to promulgating a CX). In establishing the proposed CX, the Department is following CEQ's procedural regulations, which include publishing the notice of the proposed CX in the **Federal Register** for public review and comment, considering public comments, and consulting with the CEQ to obtain CEQ's written determination of conformity with NEPA and the CEQ regulations. (*See* 40 CFR 1507.3(b)(2)) To substantiate the proposed CX as a category of actions that do not normally have a significant effect on the human environment, the BLM also has developed the Verification Report, an administrative record to support the category of actions to be covered by the CX. This analysis includes a review of multiple environmental documents in which actions that would fall under the proposed CX have been found not to have a significant effect on the human environment.

Comment: The BLM received comments that promulgation of the CX requires consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS).

Response: To the extent that establishment of a NEPA procedure such as the proposed CX is subject to the requirements of section 7 of the Endangered Species Act, the action has no effect on listed species or critical habitat. Projects the BLM may pursue in reliance on this CX to implement salvage harvest would be subject to review under Section 7 of ESA and, if the parameters of the proposed action and site-specific conditions require, appropriate consultation with the FWS and NMFS would occur.

Comment: The BLM received a comment that the CX violates the APA because it is changing an existing CX (salvage on up to 250 acres) without justifying the need for the change and the circumstances allowing for the acreage expansion.

Response: The BLM is not proposing to change the existing CX (C.8), the BLM is proposing the establishment of an entirely new CX that would be available for BLM in addition to the existing 250-acre CX. The BLM has prepared a Verification Report that extensively explains the justification for the new CX and the circumstances associated with land management warranting the identification of this new category's establishment.

Categorical Exclusion

The Department and the BLM find the category of actions described in the CX does not normally have a significant effect on the quality of the human environment. This finding is based on the analysis presented in the Verification Report to establish this CX. In addition to the BLM's review of projects evaluated through EAs, and consideration of these projects following implementation, the BLM's review of the available scientific literature demonstrates that the activities covered by this CX would not normally cause significant environmental effects. As discussed in detail in the Verification Report Methods section, the research provides evidence for both the need for the CX to facilitate the timely authorization of projects that can realize the long-term benefits of salvage harvest and provide effective project design features to minimize adverse impacts.

As discussed in the Methods section of the Verification Report, the BLM currently implements timber salvage sales supported by EAs, EISs, and since 2007 has relied upon the existing timber salvage CX (C.8), and conducts post-harvest monitoring on all sales. The BLM has implemented salvage sales in response to insects and disease, windthrow, drought, and wildfires through commercial harvest using helicopter, cable yarding, and ground-based methods. The BLM evaluated NEPA documents for previously implemented salvage harvest to determine the scope of environmental consequences anticipated to result from the proposed actions. In the EAs reviewed, no significant impacts were predicted to result from the kinds of activities covered by this CX for salvage harvest, nor were any unanticipated impacts observed after treatments were implemented. Actual impacts were the same as predicted impacts in all cases. There were no instances where any of the projects evaluated in the EAs reviewed would have resulted in a need to complete an EIS. The BLM has implemented elements of the salvage actions included as part of this new CX under the current salvage CX and has not found significant impacts or instances where the presence of extraordinary circumstances prevented reliance on the existing salvage CX. In the two circumstances where the BLM completed EISs for salvage harvest, the specific combination of actions proposed, and the scale of the proposals warranted analysis through EISs. The scale and scope of the actions proposed for CX here are readily distinguishable from those evaluated in the EISs. All proposed actions and alternatives evaluated in the EAs reviewed included project design features that minimize environmental consequences. Often, through application of locally appropriate design elements, environmental effects were minimized to the level of non-significant, whereby resource issues were eliminated from further analysis due to application of these elements incorporated into project design.

The intent of this CX is to improve the efficiency of the environmental review process for the harvest of dead, dying, or damaged trees impacted by biotic or abiotic disturbances. Each proposed action must be reviewed for extraordinary circumstances that would preclude the use of this CX. The Department's list of extraordinary circumstances under which a normally excluded action would require further analysis and documentation to determine whether the preparation of an EA or EIS is necessary is found at 43 CFR 46.215. If a timber salvage project is within the activity described in this CX, then these ''extraordinary circumstances'' will be considered in the context of the proposed project to determine if there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects, or they indicate the potential for effects that merit additional consideration in an EA or EIS. If any of the extraordinary circumstances indicate such potential, the CX would not be used, and an EA or EIS would be prepared.

Amended Text for the Departmental Manual

516 DM 11 at Section. 11.9 C. (10) Forestry:

(10) Salvaging dead and dying trees resulting from fire, insects, disease, drought, or other disturbances not to exceed 1,000 acres for disturbances of 3,000 acres or less. For disturbances greater than 3,000 acres, harvesting shall

not exceed ⅓ of a disturbance area but not to exceed 3,000 acres total harvest.

(a) Covered actions:

(i) Cutting, yarding, and removal of dead or dying trees and live trees needed for landings, skid trails, and road clearing. Includes chipping/grinding and removal of residual slash.

(ii) Jackpot burning, pile burning, or underburning.

(iii) Seeding or planting necessary to accelerate native species re-establishment.

(b) Such actions:

(i) Shall not require more than 1 mile of permanent road construction to facilitate the covered actions. Permanent roads are routes intended to be part of the BLM's permanent transportation system.

(ii) If a permanent road is constructed to facilitate the covered actions, the segments shall conform to all applicable land use planning decisions for permanent road construction in the land use plan; and if travel management planning has been completed, the route specific designations related to the new segments shall be disclosed.

(iii) May include temporary roads, which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM's permanent transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, erosion control, potential sedimentation to streams, and impacts on land and resources.

(iv) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.

(v) Shall require inclusion of project design features providing for protections of the following resources and resource uses consistent with the decisions in the applicable land use plan in the documentation of the categorical exclusion. If no land use plan decisions apply, documentation of the categorical exclusion shall identify how the following resources and resource uses are to be appropriately addressed:

(1) Level of snag and downed wood creation/retention;

(2) Specifications for erosion control features such as water bars, dispersed slash;

(3) Criteria for minimizing or remedying soil compaction;

(4) Types and extents of logging system constraints (*e.g.,* seasonal, location, extent, etc.);

(5) Extent and purpose of seasonal operating constraints or restrictions;

(6) Criteria to limit spread of weeds;

(7) Size of riparian buffers and/or riparian zone operating restrictions;

(8) Operating constraints and restrictions for underburning or pile burning;

(9) Revegetation standards for temporary roads; and

(10) Limitations on road densities.

(c) For this CX, a dying tree is defined as a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgement of an experienced forest professional or someone technically trained for the work, is likely to die within a few years. Examples include, but are not limited to:

(i) Harvesting a portion of a stand damaged by a wind or ice event.

(ii) Harvesting fire damaged trees.

Authority: NEPA, the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*); E.O. 11514, March 5, 1970, as amended by E.O. 11991, May 24, 1977; and CEQ regulations (40 CFR 1500–1508).

Stephen G. Tryon,

Director, Office of Environmental Policy and Compliance.

[FR Doc. 2020–27159 Filed 12–9–20; 8:45 am]

BILLING CODE 4331–84–P

NATIONAL CAPITAL PLANNING COMMISSION

Notice of Final Adoption and Effective Date; Submission Guidelines Related to Antennas on Federal and Certain District Buildings and Land

AGENCY: National Capital Planning Commission.

ACTION: Notice of final adoption and effective date.

SUMMARY: On December 3, 2020, the National Capital Planning Commission (NCPC) adopted revisions to the Submission Guidelines updating the requirements and criteria for antennas placed on Federal and certain District buildings and lands in the National Capital Region. Federal and District agency applicants who are seeking to place antennas on their property are subject to review by the Commission following a process laid out in the Submission Guidelines. The revisions to the Antenna Submission Guidelines address several deficiencies in the current guidelines, namely: Adding definitions for small cells and temporary antennas; including several new criteria to help protect viewsheds and address multiple antennas on building rooftops; and identifying the review process for temporary and small cell antennas. The final amended document can be found at: *https://www.ncpc.gov/initiatives/antennas/.*

DATES: The revised Submission Guidelines will become effective February 8, 2021.

FOR FURTHER INFORMATION CONTACT: Carlton Hart at (202) 482–7252 or *info@ncpc.gov.*

Authority: 40 U.S.C. 8721(e)(2).

Dated: December 7, 2020.

Anne R. Schuyler,

General Counsel.

[FR Doc. 2020–27150 Filed 12–9–20; 8:45 am]

BILLING CODE 7502–02–P

NATIONAL SCIENCE FOUNDATION

Request for Information; Strategic and Performance Plans

AGENCY: National Science Foundation.

ACTION: Request for information.

SUMMARY: The Government Performance and Results Act (GPRA) and GPRA Modernization act of 2010 requires federal agencies to publish their strategic and performance plans in pursuit of their missions. Through this Request for Information (RFI), the National Science Foundation (NSF) seeks public comment on the key elements of the strategic plan—the Vision, Core Values, Strategic Goals, and Strategic Objectives—and high-level questions that will guide the development of the 2022–2026 NSF Strategic Plan.

DATES: Please send comments on or before January 22, 2021. Comments received after that date will be considered to the extent practicable. Send comments to the address below.

ADDRESSES: Submit comments to the strategic planning website. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1.800.877.8339, 24 hours a day, 7 days a week, 365 days a year (including Federal holidays).

SUPPLEMENTARY INFORMATION:

1.0 Background

NSF was created ''to promote the progress of science; to advance the

national health, prosperity, and welfare; to secure the national defense . . .'' (1950, as amended). Looking ahead, NSF aims to advance the frontiers of research into the future and secure global leadership in science and engineering, while ensuring accessibility and inclusivity. To meet these aims, NSF expands knowledge in science, engineering, and learning, and advances the capability of the nation to meet current and future challenges, while continuing to enhance its performance.

2.0 Request for information

Through this Request for Information (RFI), the National Science Foundation (NSF) seeks comment from a broad array of stakeholders regarding the 2022–2026 Strategic Plan. Comments should be submitted to the strategic plan website and should reference the previous NSF Strategic plan for FY 2018–2022 which can be found here. We welcome comments on the key elements of the strategic plan, including Vision, Core Values, Strategic Goals, and Strategic Objectives, and answers to the following questions:

1. What are the interests, values and emergent science and policy issues that the Strategic Plan should recognize?
2. How can NSF help maintain US leadership in an evolving global research and education landscape?
3. How can the plan best underscore the importance to the Nation of fundamental research and its broader impacts?

Dated: December 7, 2020.

Suzanne H. Plimpton,

Reports Clearance Officer, National Science Foundation.

[FR Doc. 2020–27120 Filed 12–9–20; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL SCIENCE FOUNDATION

Sunshine Act Meetings; National Science Board

The National Science Board (NSB), pursuant to NSF regulations (45 CFR part 614), the National Science Foundation Act, as amended, (42 U.S.C. 1862n–5), and the Government in the Sunshine Act (5 U.S.C. 552b), hereby gives notice of the scheduling of meetings for the transaction of NSB business as follows:

TIME AND DATE: Wednesday, December 9, 2020 from 11:00 a.m. to 6:30 p.m., and Thursday, December 10, 2020 from 11:00 a.m. to 6:45 p.m. EST.

PLACE: These meetings will be held by videoconference. There will be no in-person meetings to attend. The public may observe the public meetings, which will be streamed to the NSF You Tube channel. For meetings on Wednesday, December 9, go to: *https://www.youtube.com/watch?v=Rl3HttPA_b4.* For meetings on Thursday, December 10, go to: *https://www.youtube.com/watch?v=uGjqM0yX4rI.*

STATUS: Some of these meetings will be open to the public. Others will be closed to the public. See full description below.

MATTERS TO BE CONSIDERED:

Wednesday, December 9, 2020

Plenary Board Meeting

Open Session: 11:00 a.m.–12:55 p.m.; 1:25 p.m.–2:10 p.m.

- NSB Chair's Remarks
- NSF Director's Remarks—Update on Arecibo Observatory
- NSB Chair Activity Summary
- COVID–19 Impact on Women
- NSF Planning and Response to COVID–19
- Vision 2030 Implementation Working Group Update

Committee on Oversight (CO)

Open Session: 2:10 p.m.–3:25 p.m.

- Committee Chair's Opening Remarks
- Approval of Committee Meeting Minutes
- Approval of Merit Review Digest Overview
- Presentations and Discussion of Broader Impacts
- Inspector General's Update
- Chief Financial Officer's Update
- Chair's Closing Remarks

Committee on National Science and Engineering Policy (SEP)

Open Session: 3:45 p.m.–4:35 p.m.

- Committee Chair's Opening Remarks
- Approval of Prior Minutes
- Update on planning for *Indicators 2022*
- Impacts of COVID–19 on NCSES Data and Data Products
- Update and Discussion of SEP Policy Products

Committee on Awards and Facilities (A&F)

Open Session: 4:35 p.m.–4:45 p.m.

- Committee Chair's Opening Remarks
- Approval of Prior Minutes
- Rolling Calendar Year 2020–2021 Schedule of Planned Action and Context Items

Plenary Board Meeting

Open Session: 5:00–6:30 p.m.

- Celebrating Science and Public Service with the 2020 Waterman and Honorary Awards Winners

Thursday, December 10, 2020

Plenary Board Meeting

Open Session: 11:00 a.m.–11:30 a.m.

- Committee on Equal Opportunities in Science and Engineering (CEOSE) Briefing

Committee on Strategy (CS)

Open Session: 11:30 a.m.–1:40 p.m.

- Committee Chair's Remarks
- Approval of Prior Minutes
- Update on FY 2021 Budget Appropriations
- NSF Strategic Plan 2022–2026
- EHR Advisory Committee STEM Education for the Future Report
- NSF Workforce/Missing Millions Briefing
- NSF Translation, Innovation, and Partnerships (TIP) Briefing

Committee on Strategy (CS)

Closed Session: 2:00 p.m.–2:45 p.m.

- Committee Chair's Remarks
- Approval of Prior Minutes
- Update on FY 2022 Budget Request Development
- Translation, Innovation and Partnerships/Workforce/Missing Millions Discussion

Committee on Awards and Facilities (A&F)

Closed Session: 2:45 p.m.–4:35 p.m.

- Committee Chair's Opening Remarks
- Approval of Prior Minutes
- Written Item: Regional Class Research Vessels
- Annual Report from the Chief Officer for Research Facilities
- Arecibo Observatory

Plenary Board

Closed Session: 4:45 p.m.–4:55 p.m.

- NSB Chair's Opening Remarks
- Approval of Prior Minutes
- Closed Committee Reports

Plenary Board

Executive Closed Session: 4:55 p.m.–5:40 p.m.

- NSB Chair's Opening Remarks
- Approval of Prior Minutes
- NSF Director's Discussion
  - Personnel updates
- 2021 Honorary Awards Discussion and Vote

Committee on External Engagement (EE)

Open Session: 5:45 p.m.–6:25 p.m.

- Committee Chair's Opening Remarks
- Approval of Prior Minutes
- Near Term Policy Engagement
- UT-Knoxville *Vision* Listening Session
- NSB Messaging

Plenary Board

Open Session: 6:25 p.m.–6:45 p.m.

- NSB Chair's Opening Remarks
- Approval of Prior Minutes
- NSF Director's Remarks
  - Senior Staff Updates
  - Office of Legislative and Public Affairs Update

sbull; Open Committee Reports

- Votes on NSB CY 2021 Schedule and Overview to the 2019 Merit Review Digest

Meeting Adjourns: 6:45 p.m.

MEETINGS THAT ARE OPEN TO THE PUBLIC:

Wednesday, December 9, 2020

11:00 a.m.–12:55 p.m. Plenary NSB
1:25 p.m.–2:10 p.m. Plenary NSB
2:10 p.m.–3:25 p.m. CO
3:45 p.m.–4:35 p.m. SEP
4:35 p.m.–4:45 p.m. A&F
5:00 p.m.–6:30 p.m. Plenary NSB

Thursday, December 10, 2020

11:00 a.m.–11:30 a.m. Plenary NSB
11:30 a.m.–1:40 p.m. CS
5:45 p.m.–6:25 p.m. EE
6:25 p.m.–6:45 p.m. Plenary

MEETINGS THAT ARE CLOSED TO THE PUBLIC:

Thursday, December 10, 2020

2:00 p.m.–2:45 p.m. CS
2:45 p.m.–4:35 p.m. A&F
4:45–4:55 p.m. Plenary
4:55 p.m.–5:40 p.m. Plenary Executive

CONTACT PERSONS FOR MORE INFORMATION: The NSB Office contact is Brad Gutierrez, *bgutierr@nsf.gov,* 703–292–7000. The NSB Public Affairs contact is Nadine Lynn, *nlymn@nsf.gov,* 703–292–2490. The following persons will be available to provide technical support in accessing the YouTube video: Angel Ntumy (*antumy@associates.nsf.gov*); Phillip Moulden (*pmoulden@associates.nsf.gov*).

Supplemental Information: Public portions of meetings will be streamed on YouTube so the public can view them. For meetings on Wednesday, December 9, go to: *https://www.youtube.com/watch?v=Rl3HttPA_b4.* For meetings on Thursday, December 10, go to: *https://www.youtube.com/watch?v=uGjqM0yX4rI.*

Please refer to the NSB website for additional information. You will find any updated meeting information and schedule updates (time, place, subject matter, or status of meeting) at *https://www.nsf.gov/nsb/meetings/notices.jsp#sunshine.*

Members of the public are advised that the NSB provides some flexibility around meeting times. A meeting may be allowed to run over by as much as 15 minutes if the Chair decides the extra time is warranted. The next meeting will start no later than 15 minutes after the noticed start time. If a meeting ends early, the next meeting may start up to 15 minutes earlier than the noticed start time. At no point will NSB or committee meetings vary from noticed times by more than 15 minutes. Open meetings can also be watched in their entirety later through the YouTube link.

Chris Blair,

Executive Assistant to the National Science Board Office.

[FR Doc. 2020–27357 Filed 12–8–20; 4:15 pm]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2020–0236]

Information Collection: Licenses and Radiation Safety Requirements for Irradiators

AGENCY: Nuclear Regulatory Commission.

ACTION: Renewal of existing information collection; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) invites public comment on the renewal of Office of Management and Budget (OMB) approval for an existing collection of information. The information collection is entitled, ''Licenses and Radiation Safety Requirements for Irradiators.''

DATES: Submit comments by February 8, 2021. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the Federal Rulemaking website:

- *Federal Rulemaking website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2020–0236. Address questions about NRC docket IDs in *Regulations.gov* to Jennifer Borges; telephone: 301–287–9127; email: *Jennifer.Borges@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *Mail comments to:* David Cullison, Office of the Chief Information Officer, Mail Stop: T–6 A10M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

For additional direction on obtaining information and submitting comments, see ''Obtaining Information and Submitting Comments'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *Infocollects.Resource@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2020–0236 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- *Federal Rulemaking website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2020–0236. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2020–0236 on this website.
- *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, 301–415–4737, or by email to *pdr.resource@nrc.gov.* The supporting statement is available in ADAMS under Accession No. ML20245E536.
- *Attention:* The PDR, where you may examine and order copies of public documents is currently closed. You may submit your request to the PDR via email at *PDR.Resource@nrc.gov* or call 1–800–397–4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.
- *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without

charge by contacting NRC's Clearance Officer, David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *Infocollects.Resource@nrc.gov.*

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal Rulemaking website (*https://www.regulations.gov*). Please include Docket ID NRC–2020–0236 in your comment submission.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at *https://www.regulations.gov* as well as enter the comment submissions into ADAMS, and the NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the NRC is requesting public comment on its intention to request the OMB's approval for the information collection summarized below.

1. *The title of the information collection:* 10 CFR part 36 ''Licenses and Radiation Safety Requirements for Irradiators.''
2. *OMB approval number:* 3150–0158.
3. *Type of submission:* Extension.
4. *The form number, if applicable:* Not applicable.
5. *How often the collection is required or requested:* Applications for new licenses and amendments may be submitted at any time (on occasion). Applications for renewal are submitted every 15 years. Reports are submitted as events occur.
6. *Who will be required or asked to respond:* Applicants for and holders of specific licenses authorizing the use of licensed material for irradiators.
7. *The estimated number of annual responses:* 2,396 responses.
8. *The estimated number of annual respondents:* 70 respondents.
9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 39,836 hours.
10. *Abstract:* Part 36 of title 10 of the *Code of Federal Regulations,* establishes radiation safety requirements for the use of radioactive material for irradiators. The information in the applications, reports, and records is used by the NRC staff to ensure that the health and safety of the public is protected and that the licensee possession and use of source or byproduct material is in compliance with license and regulatory requirements.

III. Specific Requests for Comments

The NRC is seeking comments that address the following questions:

1. Is the proposed collection of information necessary for the NRC to properly perform its functions? Does the information have practical utility?
2. Is the estimate of the burden of the information collection accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection on respondents be minimized, including the use of automated collection techniques or other forms of information technology?

Dated: December 4, 2020.

For the Nuclear Regulatory Commission.

David C. Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2020–27061 Filed 12–9–20; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2020–0170]

Information Collection: Reactor Site Criteria

AGENCY: Nuclear Regulatory Commission.

ACTION: Renewal of existing information collection; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) invites public comment on the renewal of Office of Management and Budget (OMB) approval for an existing collection of information. The information collection is entitled, ''Reactor Site Criteria.''

DATES: Submit comments by February 8, 2021. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the Federal Rulemaking website:

- *Federal Rulemaking website:* Go to *https://www.regulations.gov/* and search for Docket ID NRC–2020–0170. Address questions about NRC docket IDs in *Regulations.gov* to Jennifer Borges; telephone: 301–287–9127; email: *Jennifer.Borges@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *Mail comments to:* David Cullison, Office of the Chief Information Officer, Mail Stop: T–6 A10M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

For additional direction on obtaining information and submitting comments, see ''Obtaining Information and Submitting Comments'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *Infocollects.Resource@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2020–0170 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- *Federal Rulemaking website:* Go to *https://www.regulations.gov/* and search for Docket ID NRC–2020–0170. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2020–0170 on this website.
- *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, 301–415–4737, or by email to *pdr.resource@nrc.gov.* A copy of the collection of information and related instructions

may be obtained without charge by accessing ADAMS Accession No. ML20210M335. The supporting statement is available in ADAMS under Accession No. ML20210M358.

• *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without charge by contacting the NRC's Clearance Officer, David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal Rulemaking website (*https://www.regulations.gov*). Please include Docket ID NRC–2020–0170 in your comment submission.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at *https://www.regulations.gov/* and entered into ADAMS. Comment submissions are not routinely edited to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the OMB, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that comment submissions are not routinely edited to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35), the NRC is requesting public comment on its intention to request the OMB's approval for the information collection summarized below.

1. *The title of the information collection:* 10 CFR part 100, Reactor Site Criteria.
2. *OMB approval number:* 3150–0093.
3. *Type of submission:* Extension.
4. *The form number, if applicable:* N/A.
5. *How often the collection is required or requested:* As necessary in order for the NRC to assess the adequacy of proposed seismic design bases and the design bases for other site hazards for nuclear power and test reactors constructed and licensed in accordance with parts 50 and 52 of title 10 of the *Code of Federal Regulations* (10 CFR) and the Atomic Energy Act of 1954, as amended.
6. *Who will be required or asked to respond:* Applicants who apply for an early site permit (ESP), combined license (COL) or a construction permit (CP) or operating license (OL) on or after January 10, 1997.
7. *The estimated number of annual responses:* 0.66.
8. *The estimated number of annual respondents:* 0.66.
9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 48,180 hours (73,000 hours per application × 0.66 applications).
10. *Abstract:* 10 CFR part 100, ''Reactor Site Criteria,'' establish approval requirements for proposed sites for the purpose of constructing and operating stationary power and testing reactors. Subpart B, ''Evaluation Factors for Stationary Power Reactor Site Applications on or After January 10, 1997,'' requirements apply to applicants who apply for an early site permit (ESP), combined license (COL) or a construction permit (CP) or operating license (OL) on or after January 10, 1997. This clearance is necessary since the NRC is expecting approximately two COL applications over the next 3 years. The applicants must provide information regarding the physical characteristics of the site in addition to the potential for natural phenomena and man-made hazards. This includes information on meteorological hazards (such as hurricanes, tornadoes, snowfall, and extreme temperatures), hydrologic hazards (such as floods, tsunami, and seiches) geologic hazards (such as faulting, seismic hazards, and the maximum credible earthquake) and factors such as population density, the proximity of man-related hazards (*e.g.,* airports, dams, transportation routes, military and chemical facilities), and site hydrological and atmospheric dispersion characteristics. The NRC staff reviews the submitted information and, if necessary, generates a request for additional information. The staff meets with the applicant and conducts a site visit to resolve any open issues. When the open issues have been resolved, the staff writes the final safety evaluation report, which is published and used as a basis for the remainder of the NRC licensing process.

III. Specific Requests for Comments

The NRC is seeking comments that address the following questions:

1. Is the proposed collection of information necessary for the NRC to properly perform its functions? Does the information have practical utility?
2. Is the estimate of the burden of the information collection accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection on respondents be minimized, including the use of automated collection techniques or other forms of information technology?

Dated: December 4, 2020.

For the Nuclear Regulatory Commission.

David C. Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2020–27062 Filed 12–9–20; 8:45 am]

BILLING CODE 7590–01–P

POSTAL REGULATORY COMMISSION

[Docket Nos. MC2021–40 and CP2021–41]

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:* December 14, 2020.

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

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).:* MC2021–40 and CP2021–41; *Filing Title:* USPS Request to Add Priority Mail & First-Class Package Service Contract 180 to Competitive Product List and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* December 4, 2020; *Filing Authority:* 39 U.S.C. 3642, 39 CFR 3040.130 through 3040.135, and 39 CFR 3035.105; *Public Representative:* Christopher C. Mohr; *Comments Due:* December 14, 2020.

This Notice will be published in the **Federal Register**.

Erica A. Barker,

Secretary.

[FR Doc. 2020–27138 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–FW–P

[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).

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 42 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–35, CP2021–36.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27076 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail Express Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on December 1, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail Express Contract 85 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–38, CP2021–39.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27079 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail and First-Class Package Service Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on December 1, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail & First-Class Package Service Contract 179 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–37, CP2021–38.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27078 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail Express Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 23, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail Express Contract 84 to Competitive Product List.* Documents

are available at *www.prc.gov,* Docket Nos. MC2021–29, CP2021–30.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27070 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 39 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–32, CP2021–33.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27073 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 41 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–34, CP2021–35.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27075 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail and First-Class Package Service Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on December 4, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail & First-Class Package Service Contract 180 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–40, CP2021–41.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27081 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on December 3, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail Contract 682 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–39, CP2021–40.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27080 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 43 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–36, CP2021–37.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27077 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 40 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–33, CP2021–34.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27074 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Parcel Select Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 27, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Parcel Select Contract 38 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–31, CP2021–32.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27072 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

POSTAL SERVICE

Product Change—Priority Mail Negotiated Service Agreement

AGENCY: Postal Service™.

ACTION: Notice.

SUMMARY: The Postal Service gives notice of filing a request with the Postal Regulatory Commission to add a domestic shipping services contract to the list of Negotiated Service Agreements in the Mail Classification Schedule's Competitive Products List.

DATES: *Date of required notice:* December 10, 2020.

FOR FURTHER INFORMATION CONTACT: Sean Robinson, 202–268–8405.

SUPPLEMENTARY INFORMATION: The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on November 23, 2020, it filed with the Postal Regulatory Commission a *USPS Request to Add Priority Mail Contract 681 to Competitive Product List.* Documents are available at *www.prc.gov,* Docket Nos. MC2021–30, CP2021–31.

Sean Robinson,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2020–27071 Filed 12–9–20; 8:45 am]

BILLING CODE 7710–12–P

RAILROAD RETIREMENT BOARD

Agency Forms Submitted for OMB Review, Request for Comments

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the Railroad Retirement Board (RRB) is forwarding an Information Collection Request (ICR) to the Office of Information and Regulatory Affairs (OIRA), Office of Management and Budget (OMB). Our ICR describes the information we seek to collect from the public. Review and approval by OIRA ensures that we impose appropriate paperwork burdens.

The RRB invites comments on the proposed collections of information to determine (1) the practical utility of the collections; (2) the accuracy of the estimated burden of the collections; (3) ways to enhance the quality, utility, and clarity of the information that is the subject of collection; and (4) ways to minimize the burden of collections on respondents, including the use of automated collection techniques or other forms of information technology. Comments to the RRB or OIRA must contain the OMB control number of the ICR. For proper consideration of your comments, it is best if the RRB and OIRA receive them within 30 days of the publication date.

1. Title and purpose of information collection: Application for Employee Annuity Under the Railroad Retirement Ac; OMB 3220–0002.

Section 2(a) of the Railroad Retirement Act (RRA) (45 U.S.C. 231a) provides for payments of age and service, disability, and supplemental annuities to qualified employees. An annuity cannot be paid until the employee stops working for a railroad employer. In addition, the age and service employee must relinquish any rights held to such jobs. A disabled employee does not need to relinquish employee rights until attaining Full Retirement Age, or if earlier, when their spouse is awarded a spouse annuity. Benefits become payable after the employee meets certain other requirements, which depend on the type of annuity payable. The requirements for obtaining the annuities are prescribed in 20 CFR 216 and 220.

To collect the information needed to help determine an applicant's entitlement to, and the amount of, an employee retirement annuity the RRB uses Forms AA–1, *Application for Employee Annuity;* AA–1d, *Application for Determination of Employee Disab*ility; G–204, *Verification of Workers Compensation/Public Disability Benefit Information,* and electronic Forms AA–1cert, *Application Summary and Certification,* and AA–1sum, *Application Summary.*

The AA–1 application process obtains information from an applicant about their marital history, work history, military service, benefits from other governmental agencies, railroad pensions and Medicare entitlement for either an age and service or disability annuity. An RRB representative interviews the applicant either at a field office, an itinerant point, or by telephone. During the interview, the RRB representative enters the information obtained into an on-line information system. Upon completion of the interview, the on-line information system generates Form AA–1cert, *Application Summary and Certification,* or Form AA–1sum, *Application Summary,* a summary of the information that was provided for the applicant to review and approve. Form AA–1cert documents approval using the traditional pen and ink ''wet'' signature, and Form AA–1sum documents approval using the alternative signature method called Attestation. When the RRB representative is unable to contact the applicant in person or by telephone, for example, the applicant lives in another country, a manual version of Form AA–1 is used.

Form AA–1d, *Application for Determination of Employee's Disability,* is completed by an employee who is filing for a disability annuity under the RRA, or a disability freeze under the Social Security Act, for early Medicare based on a disability. Form G–204, *Verification of Worker's Compensation/Public Disability Benefit Information,* is used to obtain and verify information concerning a worker's compensation or a public disability benefit that is or will be paid by a public agency to a disabled railroad employee.

One response is requested of each respondent. Completion of the forms is required to obtain/retain a benefit.

Previous Requests for Comments: The RRB has already published the initial 60-day notice (85 FR 62775 on October 5, 2020) required by 44 U.S.C. 3506(c)(2). That request elicited no comments.

Information Collection Request (ICR)

Title: Application for Employee Annuity Under the Railroad Retirement Act.

OMB Control Number: 3220–0002.

Form(s) submitted: AA–1, AA–1cert, AA–1d, AA–1sum and G–204.

Type of request: Revision of a currently approved collection.

Affected public: Individuals or Households.

Abstract: The Railroad Retirement Act provides for payment of age, disability and supplemental annuities to qualified employees. The application and related forms obtain information about the applicant's family work history, military service, disability benefits from other government agencies and public or private pensions. The information is used to determine entitlement to and the amount of the annuity applied for.

Changes proposed: The RRB proposes no changes to Form AA–1 and Form AA–1 (internet). The RRB propose a minor editorial change to Form AA–1d to change the date under Section 1 ''General Instructions''. The RRB propose the following change to Form G–204: Update the title in the Paperwork Reduction Act and Privacy Act Notices to Associate Chief Information Officer for Policy and Compliance.

The burden estimate for the ICR is as follows:

Form No.	Annual responses	Time (minutes)	Burden (hours)
AA–1 (without assistance)	35	62	36
AA–1cert (with assistance)	7,050	30	3,525
AA–1sum (with assistance)	2,415	29	1,166
AA–1 (Internet) (without assistance)	3,220	45	2,415
AA–1d (with assistance)	2,600	60	2,600
AA–1d (without assistance)	5	85	7
G–204	20	15	5
Total	15,345	.....	9,754

2. *Title and purpose of information collection:* Certification of Termination of Service and Relinquishment of Rights; OMB 3220–0016.

Under Section 2(e)(2) of the Railroad Retirement Act (RRA) (45 U.S.C. 231a), an age and service annuity, spouse annuity, or divorced spouse annuity cannot be paid unless the Railroad Retirement Board (RRB) has evidence that the applicant has ceased railroad employment and relinquished rights to return to the service of a railroad employer. Under Section 2(f)(6) of the RRA, earnings deductions are required for each month an annuitant works in certain non-railroad employment termed Last Pre-Retirement Non-Railroad Employment.

Normally, the employee, spouse, or divorced spouse relinquishes rights and certifies that employment has ended as part of the annuity application process. However, this is *not always* the case. In limited circumstances, the RRB utilizes Form G–88, *Certification of Termination of Service and Relinquishment of Rights,* to obtain an applicant's report of termination of employment and relinquishment of rights. One response is required of each respondent. Completion is required to obtain or retain benefits.

Previous Requests for Comments: The RRB has already published the initial 60-day notice (85 FR 62776 on October 5, 2020) required by 44 U.S.C. 3506(c)(2). That request elicited no comments.

Information Collection Request (ICR)

Title: Certification of Termination of Service and Relinquishment of Rights.

OMB Control Number: 3220–0016.

Form(s) submitted: G–88.

Type of request: Extension without change of a currently approved collection.

Affected public: Individuals or Households.

Abstract: Under Section 2(e)(2) of the Railroad Retirement Act, the Railroad Retirement Board must have evidence that an annuitant for an age and service, spouse, or divorced spouse annuity has ceased railroad employment and relinquished their rights to return to the service of a railroad employer. The collection provides the means for obtaining this evidence.

Changes proposed: The RRB proposes no changes to Form G–88.

The burden estimate for the ICR is as follows:

Form No.	Annual responses	Time (minutes)	Burden (hours)
G–88	3,600	6	360

3. Title and Purpose of information collection: Statement of Authority to Act for Employee; OMB 3220–0034.

Under Section 5(a) of the Railroad Unemployment Insurance Act (RUIA) (45 U.S.C. 355), claims for benefits are to be made in accordance with such regulations as the Railroad Retirement Board (RRB) shall prescribe. The provisions for claiming sickness benefits as provided by Section 2 of the RUIA are prescribed in 20 CFR 335.2. Included in these provisions is the RRB's acceptance of forms executed by someone else on behalf of an employee if the RRB is satisfied that the employee is sick or injured to the extent of being unable to sign forms.

The RRB utilizes Form SI–10, Statement of Authority to Act for Employee, to provide the means for an individual to apply for authority to act on behalf of an incapacitated employee and also to obtain the information necessary to determine that the delegation should be made. Part I of the form is completed by the applicant for the authority and Part II is completed by the employee's doctor. One response is requested of each respondent.

Completion is required to obtain benefits.

Previous Requests for Comments: The RRB has already published the initial 60-day notice (85 FR 62777 on October 5, 2020) required by 44 U.S.C. 3506(c)(2). That request elicited no comments.

Information Collection Request (ICR)

Title: Statement of Authority to Act for Employee.

OMB Control Number: 3220–0034.

Form(s) submitted: SI–10.

Type of request: Extension without change of a currently approved collection.

Affected public: Individuals or Households.

Abstract: Under 20 CFR 335.2, the Railroad Retirement Board (RRB) accepts claims for sickness benefits by other than the sick or injured employees, provided the RRB has the information needed to satisfy itself that the delegation should be made.

Changes proposed: The RRB proposes no changes to Form SI–10.

The burden estimate for the ICR is as follows:

Form No.	Annual responses	Time (minutes)	Burden (hours)
SI–10	30	6	3

4. Title and Purpose of information collection: Employee Non-Covered Service Pension Questionnaire; OMB 3220–0154

Section 215(a)(7) of the Social Security Act provides for a reduction in social security benefits based on employment not covered under the Social Security Act or the Railroad Retirement Act (RRA). This provision applies a different social security benefit formula to most workers who are first eligible after 1985 to both a pension based in whole or in part on non-covered employment and a social security retirement or disability benefit. There is a guarantee provision that limits the reduction in the social security benefit to one-half of the portion of the pension based on non-covered employment after 1956. Section 8011 of Public Law 100–647 changed the effective date of the onset from the first month of eligibility to the first month of concurrent entitlement to the non-covered service benefit and the RRA benefit.

Section 3(a)(1) of the RRA (45 U.S.C. 231b) provides that the Tier I benefit of an employee annuity shall be equal to the amount (before any reduction for age or deduction for work) the employee would receive if entitled to a like benefit under the Social Security Act. The reduction for a non-covered service pension also applies to a Tier I portion of the employee annuity under the RRA when the annuity or non-covered service pension begins after 1985. Since the amount of a spouse's Tier I benefit is one-half of the employee's Tier I, the spouse annuity is also affected.

Form G–209, Employee Non-Covered Service Pension Questionnaire, is used by the RRB to obtain needed information (1) from a railroad employee who while completing Form AA–1, Application for Employee Annuity (OMB No. 3220–0002), indicates entitlement to or receipt of a pension based on employment not covered under the Railroad Retirement Act or the Social Security Act; or (2) from a railroad employee when an independently-entitled divorced spouse applicant believes the employee to be entitled to a non-covered service pension. However, this development is unnecessary if RRB records indicate the employee has 30 or more years of coverage; or (3) from an employee annuitant who becomes entitled to a pension based on employment not covered under the Railroad Retirement Act or the Social Security Act. One response is requested of each respondent. Completion is required to obtain or retain benefits.

Previous Requests for Comments: The RRB has already published the initial 60-day notice (85 FR 62777 on October 5, 2020) required by 44 U.S.C. 3506(c)(2). That request elicited no comments.

Information Collection Request (ICR)

Title: Employee Non-Covered Service Pension Questionnaire.

OMB Control Number: 3220–0154.

Form(s) submitted: G–209.

Type of request: Extension without change of a currently approved collection.

Affected public: Individuals or Households.

Abstract: Under Section 3 of the Railroad Retirement Act, the Tier I portion of an employee annuity may be subjected to a reduction for benefits received based on work not covered under the Social Security Act or Railroad Retirement Act. The questionnaire obtains the information needed to determine if the reduction applies and the amount of such reduction.

Changes proposed: The RRB proposes no changes to Form G–209.

The burden estimate for the ICR is as follows:

Form No.	Annual responses	Time (minutes)	Burden (hours)
G–209 (Partial Questionnaire)	50	1	1
G–209 (Full Questionnaire)	100	8	13
Total	150	.....	14

Additional Information or Comments: Copies of the forms and supporting documents can be obtained from Kennisha Tucker at (312) 469–2591 or *Kennisha.Tucker@rrb.gov.* Comments regarding the information collection should be addressed to Brian Foster, Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275 or *Brian.Foster@rrb.gov.*

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.

Brian Foster,

Clearance Officer.

[FR Doc. 2020–27099 Filed 12–9–20; 8:45 am]

BILLING CODE 7905–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–90567; File No. SR-CboeBYX–2020–033]

Self-Regulatory Organizations; Cboe BYX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend its Fee Schedule To Remove Unused Routing-related Fee Codes

December 4, 2020.

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 December 1, 2020, Cboe BYX Exchange, Inc. (the ''Exchange'' or ''BYX'') 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 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 the Substance of the Proposed Rule Change

Cboe BYX Exchange, Inc. (the ''Exchange'' or ''BZX'') is filing with the Securities and Exchange Commission (''Commission'') a proposed rule change to amend the fee schedule. 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://markets.cboe.com/us/equities/regulation/rule_filings/byx/*), 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 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 fee schedule to remove unused routing-related fee codes, effective December 1, 2020.

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 is only one of 16 registered equities exchanges, as well as a number of alternative trading systems and other off-exchange venues that do not have similar self-regulatory responsibilities under the Exchange Act, to which market participants may direct their order flow. Based on publicly available information,[3] no single registered equities exchange has more than 16% of the market share. Thus, in such a low-concentrated and highly competitive market, no single equities exchange possesses significant pricing power in the execution of order flow. The Exchange in particular operates a ''Taker-Maker'' model whereby it pays credits to members that remove liquidity and assesses fees to those that add liquidity. The Exchange's Fees Schedule sets forth the standard rebates and rates applied per share for orders that provide and remove liquidity, respectively. Particularly, for securities at or above $1.00, the Exchange provides a standard rebate of $0.00050 per share for orders that remove liquidity, assesses a fee of $0.00200 per share for orders that add liquidity and assesses a standard fee of $0.00300 for orders that are routed. For orders priced below $1.00, the Exchange does not assess a fee or provide a rebate for orders that add liquidity, assesses a fee of 0.10% of total dollar value for orders that remove liquidity, and assesses a fee of 0.29% of total dollar value for orders that are routed. 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 fee changes. Accordingly, competitive forces constrain the Exchange's transaction fees, and market participants can readily trade on competing venues if they deem pricing levels at those other venues to be more favorable.

The Exchange assesses fees in connection with orders routed away to various exchanges. The Exchange proposes to eliminate several routing-related fee codes that have been unused for several years. Particularly, the Exchange proposes to eliminate the following fee codes:

- Fee Code 9, which is appended to orders routed to NYSE Arca and adds liquidity (Tapes A or C) and provides a rebate of $0.00210 per share for securities priced at or above $1.00 and are free for securities priced below $1.00;
- Fee Code NB, which is appended to orders routed to any exchange not covered by Fee Code NA and adds non-displayed liquidity and assesses a fee of $0.00300 per share for securities priced at or above $1.00 and a fee of 0.30% of dollar value for securities priced below $1.00;
- Fee Code R, which is appended to orders re-routed by NYSE using RDOT, RDOX or Post to Away routing strategy and assesses a fee of 0.00300 per share;
- Fee Code RA, which is appended to orders re-routed to EDGA and adds liquidity and assess a fee of 0.00300 per share for securities priced at or above $1.00 and are free for securities priced below $1.00; and
- Fee Code RB, which is appended to orders routed to Nasdaq BX and adds liquidity and assess a fee of 0.00200 per share for securities priced at or above $1.00 and are free for securities priced below $1.00.

As noted, above the Exchange has observed no volume in recent years in orders yielding fee codes 9, NB, R, RA and RB. The Exchange believes that, because no Members elect to route their orders that yield these fee codes, the current demand (or lack thereof) does not warrant the infrastructure and ongoing Systems maintenance required to support separate fee codes specifically applicable to these types of transactions. Therefore, the Exchange now proposes to delete fee codes 9, NB, R, RA and RB in the Fee Schedule. The Exchange notes that Members will continue to be able to choose to route their orders to any exchange covered by these fee codes and such orders will be automatically and uniformly assessed the current fees (or rebates) in place for routed orders, as applicable (*e.g.,* the

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Cboe Global Markets, U.S. Equities Market Volume Summary, Month-to-Date (November 27, 2020), available at *https://markets.cboe.com/us/equities/market_statistics/.*

standard fees applied to routed orders, which yields fee code X).

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[4] in general, and furthers the objectives of Section 6(b)(4),[5] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and issuers and other persons using its facilities. The Exchange also believes that the proposed rule change is consistent with the objectives of Section 6(b)(5)[6] 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 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, and, particularly, is 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 also believes the proposed rule change to remove fee codes 9, NB, R, RA and RB is reasonable as the Exchange has observed no volume in orders yielding these fee codes and, therefore, the Exchange believes the proposed change will have a de minimis impact. Additionally, the Exchange believes that infrastructure and ongoing Systems maintenance required to support separate fee codes specifically applicable to these types of routed orders is not warranted or necessary in light of the fact that it has not received any recent volume yielding these fee codes. As noted above, to the extent volume for transactions currently covered by these fee codes ever increases, such orders will be automatically and uniformly assessed the current fees (or rebates) in place for routed orders, as applicable (*e.g.,* the standard fees applied to routed orders, which yield fee code X). Finally, the Exchange believes that the proposed elimination of the fee codes is equitable and not unfairly discriminatory as it applies equally to all members that use the Exchange to route orders. If members do not favor the Exchange's pricing for routed orders, they can send their routable orders directly to away markets instead of using routing functionality provided by the Exchange. Routing through the Exchange is voluntary, and the Exchange operates in a competitive environment where market participants can readily direct order flow to competing venues or providers of routing services if they deem fee levels to be excessive.

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 intramarket or intermarket 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.''[7]

The Exchange believes the proposed rule change does not impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. Particularly, the proposed change applies to all Members equally.

Next, the Exchange believes the proposed rule change does not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. As previously discussed, the Exchange operates in a highly competitive market. Members have numerous alternative venues that they may participate on and direct their order flow, including 15 other equities exchanges and off-exchange venues and alternative trading systems. Additionally, the Exchange represents a small percentage of the overall market. Based on publicly available information, no single equities exchange has more than 16% of the market share. Therefore, no exchange possesses significant pricing power in the execution of order flow. Indeed, participants can readily choose to send their orders to other exchange and off-exchange venues if they deem fee levels at those other venues to be more favorable. Moreover, the Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Specifically, in Regulation NMS, 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.''[8] The fact that this market is competitive has also long been recognized by the courts. In *NetCoalition* v. *Securities and Exchange Commission*, the D.C. Circuit stated as follows: ''[n]o one disputes that competition for order flow is 'fierce.' . . . As the SEC explained, '[i]n the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers'. . ..''.[9] Accordingly, the Exchange does not believe its proposed fee change imposes any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any unsolicited written comments from Members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)

[4] 15 U.S.C. 78f.

[5] 15 U.S.C. 78f(b)(4).

[6] 15 U.S.C. 78f.(b)(5).

[7] Securities Exchange Act Release No. 51808, 70 FR 37495, 37498–99 (June 29, 2005) (S7–10–04) (Final Rule).

[8] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005).

[9] NetCoalition v. SEC, 615 F.3d 525, 539 (DC Cir. 2010) (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782–83 (December 9, 2008) (SR–NYSEArca–2006–21)).

of the Act [10] and paragraph (f) of Rule 19b–4 thereunder.[11] 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 will institute proceedings 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 (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–CboeBYX–2020–033 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-CboeBYX–2020–033. 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 (*http://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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–CboeBYX–2020–033 and should be submitted on or before December 31, 2020.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2020–27086 Filed 12–9–20; 8:45 am]

BILLING CODE 8011–01–P

[10] 15 U.S.C. 78s(b)(3)(A).

[11] 17 CFR 240.19b–4(f).

[12] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–90568; File No. SR–FICC–2020–017]

Self-Regulatory Organizations; Fixed Income Clearing Corporation; Notice of Filing of Proposed Rule Change To Modify the Calculation of the MBSD VaR Floor To Incorporate a Minimum Margin Amount

December 4, 2020.

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 November 20, 2020, Fixed Income Clearing Corporation (''FICC'') 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 clearing agency.[3] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Clearing Agency's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change of Fixed Income Clearing Corporation (''FICC'') is attached hereto as Exhibit 5 and consists of a proposal to modify the calculation of the VaR Floor (as defined below) and the corresponding description in the FICC Mortgage-Backed Securities Division (''MBSD'') Clearing Rules (''MBSD Rules'') [4] to incorporate a ''Minimum Margin Amount'' as described in greater detail below.

The proposed rule change would necessitate changes to the Methodology and Model Operations Document—MBSD Quantitative Risk Model (the ''QRM Methodology''), which is attached hereto as Exhibit 5.[5] FICC is requesting confidential treatment of this document and has filed it separately with the Secretary of the Commission.[6]

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the clearing agency 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 clearing agency has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of the proposed rule change is to modify the calculation of the VaR Floor and the corresponding description in the MBSD Rules to incorporate a Minimum Margin Amount.

The proposed changes would necessitate changes to the QRM

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] On November 27, 2020, FICC filed this proposed rule change as an advance notice (SR–FICC–2020–804) with the Commission pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act entitled the Payment, Clearing, and Settlement Supervision Act of 2010, 12 U.S.C. 5465(e)(1), and Rule 19b–4(n)(1)(i) under the Act, 17 CFR 240.19b–4(n)(1)(i). A copy of the advance notice is *available at http://www.dtcc.com/legal/sec-rule-filings.aspx.*

[4] Capitalized terms not defined herein are defined in the MBSD Rules, *available at http://www.dtcc.com/~/media/Files/Downloads/legal/rules/ficc_mbsd_rules.pdf.*

[5] Because FICC requested confidential treatment, the QRM Methodology was filed separately with the Secretary of the Commission as part of proposed rule change SR–FICC–2016–007 (the ''VaR Filing''). *See* Securities Exchange Act Release No. 79868 (January 24, 2017), 82 FR 8780 (January 30, 2017) (SR–FICC–2016–007) (''VaR Filing Approval Order''). FICC also filed the VaR Filing proposal as an advance notice pursuant to Section 806(e)(1) of the Payment, Clearing, and Settlement Supervision Act of 2010 (12 U.S.C. 5465(e)(1)) and Rule 19b–4(n)(1)(i) under the Act (17 CFR 240.19b–4(n)(1)(i)), with respect to which the Commission issued a Notice of No Objection. *See* Securities Exchange Act Release No. 79843 (January 19, 2017), 82 FR 8555 (January 26, 2017) (SR–FICC–2016–801). The QRM Methodology has been amended following the VaR Filing Approval Order. *See* Securities Exchange Act Release Nos. 85944 (May 24, 2019), 84 FR 25315 (May 31, 2019) (SR–FICC–2019–001) and 90182 (October 14, 2020) 85 FR 66630 (October 20, 2020) (SR–FICC–2020–009).

[6] 17 CFR 240.24b–2.

Methodology. The proposed changes are described in detail below.

(i) Overview of The Required Fund Deposit and Clearing Fund Calculation

A key tool that FICC uses to manage market risk is the daily calculation and collection of Required Fund Deposits from Clearing Members. The Required Fund Deposit serves as each Clearing Member's margin. The aggregate of all Clearing Members' Required Fund Deposits constitutes the Clearing Fund of MBSD, which FICC would access should a defaulting Clearing Member's own Required Fund Deposit be insufficient to satisfy losses to FICC caused by the liquidation of that Clearing Member's portfolio.

The objective of a Clearing Member's Required Fund Deposit is to mitigate potential losses to FICC associated with liquidation of such Clearing Member's portfolio in the event that FICC ceases to act for such Clearing Member (hereinafter referred to as a ''default''). Pursuant to the MBSD Rules, each Clearing Member's Required Fund Deposit amount currently consists of the greater of (i) The Minimum Charge or (ii) the sum of the following components: the VaR Charge, the Deterministic Risk Component, a special charge (to the extent determined to be appropriate), and, if applicable, the Backtesting Charge, Holiday Charge and Intraday Mark-to-Market Charge.[7] Of these components, the VaR Charge typically comprises the largest portion of a Clearing Member's Required Fund Deposit amount.

The VaR Charge is calculated using a risk-based margin methodology that is intended to capture the market price risk associated with the securities in a Clearing Member's portfolio. The VaR Charge provides an estimate of the projected liquidation losses at a 99% confidence level. The methodology is designed to project the potential gains or losses that could occur in connection with the liquidation of a defaulting Clearing Member's portfolio, assuming that a portfolio would take three days to hedge or liquidate in normal market conditions. The projected liquidation gains or losses are used to determine the amount of the VaR Charge, which is calculated to cover projected liquidation losses at 99% confidence level.[8]

On January 24, 2017, the Commission approved FICC's VaR Filing to make certain enhancements to the MBSD value-at-risk (''VaR'') margin calculation methodology including the VaR Charge.[9] The VaR Filing amended the definition of VaR Charge to, among other things, incorporate the VaR Floor.[10] The VaR Floor is a calculation using a percentage of gross notional value of a Clearing Member's portfolio and is used as an alternative to the VaR Charge amount calculated by the VaR model for Clearing Members' portfolios where the VaR Floor calculation is greater than the VaR model-based calculation. The VaR Floor currently addresses the risk that the VaR model may calculate too low a VaR Charge for certain portfolios where the VaR model applies substantial risk offsets among long and short positions in different classes of mortgage-backed securities that have a high degree of historical price correlation. FICC applies the VaR Floor at the Clearing Member portfolio level. The VaR Floor is calculated by multiplying the market value of a Clearing Member's gross unsettled positions by a designated percentage that is no less than 0.05% and no greater than 0.30%.[11] FICC informs Clearing Members of the applicable percentage utilized by the VaR Floor by an Important Notice issued no later than 10 Business Days prior to the implementation of such percentage.[12] The percentage currently designated by FICC is 0.10%.[13]

FICC's VaR model did not respond effectively to the recent levels of market volatility and economic uncertainty, and the VaR Charge amounts that were calculated using the profit and loss scenarios generated by FICC's VaR model did not achieve a 99% confidence level for the period beginning in March 2020 through the beginning of April 2020. FICC's VaR model calculates the risk profile of each Clearing Member's portfolio by applying certain representative risk factors to measure the degree of responsiveness of a portfolio's value to the changes of these risk factors. COVID–19 market volatility, borrower protection programs, home price outlook, and the Federal Reserve Bank of New York (''FRBNY'') authority to buy and sell mortgage-backed securities have created uncertainty in forward rates, origination/refinance pipelines, voluntary/involuntary mortgage prepayments, and supply/demand dynamics that are not reflected in the FICC VaR historical data set and the FICC VaR model incorporates this historical data to calibrate the volatilities of the risk factors and the correlations between risk factors. During this period, the market uncertainty and FRBNY purchases led to market price changes that exceeded the VaR model's projections which yielded insufficient VaR Charges—particularly for higher coupon TBAs[14] where current TBA market prices may reflect higher mortgage prepayment risk than implied by the VaR model's historical risk factor data in the lookback period.

In addition, the VaR Floor did not effectively address the risk that the VaR model calculated too low a VaR Charge for all portfolios during the recent market volatility and economic uncertainty. The VaR Floor is currently designed specifically to account for substantial risk offsets among long and short positions in different classes of mortgage-backed securities that have a high degree of historical price correlation. The recent market volatility and economic uncertainty resulted in a variance between historical price changes and observed market price changes resulting in TBA price changes significantly exceeding those implied by the VaR model risk factors as indicated by backtesting data.

FICC employs daily backtesting to determine the adequacy of each Clearing Member's Required Fund Deposit.[15] FICC compares the Required Fund Deposit for each Clearing Member with the simulated liquidation gains/losses using the actual positions in the Clearing Member's portfolio, and the actual historical security returns. During the recent market volatility and economic uncertainty, the VaR Charges and the Required Fund Deposits yielded backtesting deficiencies beyond FICC's

[7] MBSD Rule 4 Section 2, *supra,* note 4.

[8] Unregistered Investment Pool Clearing Members are subject to a VaR Charge with a minimum targeted confidence level assumption of 99.5 percent. *See* MBSD Rule 4, Section 2(c), *supra* note 4.

[9] *See* VaR Filing Approval Order, *supra* note 5.

[10] The term ''VaR Floor'' is defined within the definition of VaR Charge. *See* MBSD Rule 1, *supra* note 4.

[11] The VaR Floor calculation and percentages are described within the definition of VaR Charge. *See* MBSD Rule 1, *supra* note 4.

[12] *See* definition of VaR Charge, MBSD Rule 1, *supra* note 4.

[13] *See* FICC–MBSD Important Notice MBS761–19, dated November 5, 2019 (notifying Clearing Members that the designated VaR Floor percentage is 0.10%).

[14] The vast majority of agency mortgage-backed securities trading occurs in a forward market, on a ''to-be-announced'' or ''TBA'' basis. In a TBA trade, the seller of MBS agrees on a sale price, but does not specify which particular securities will be delivered to the buyer on settlement day. Instead, only a few basic characteristics of the securities are agreed upon, such as the mortgage-backed security program, maturity, coupon rate and the face value of the bonds to be delivered. This TBA trading convention enables a heterogeneous market consisting of thousands of different mortgage-backed security pools backed by millions of individual mortgages to be reduced—for trading purposes—to a series of liquid contracts.

[15] For backtesting comparisons, FICC uses the Required Fund Deposit amount, without regard to the actual collateral posted by the Clearing Member.

risk tolerance.[16] FICC proposes to introduce a Minimum Margin Amount into the VaR Floor to enhance the MBSD VaR model performance and improve the backtesting coverage during periods of heightened market volatility and economic uncertainty. FICC believes that this proposal will increase the margin back-testing performance during periods of heightened market volatility by maintaining a VaR Charge that is appropriately calibrated to the current market price volatility.

(ii) Proposed Rule Change to Incorporate the Minimum Margin Amount in the VaR Floor

FICC is proposing to introduce a new calculation called the ''Minimum Margin Amount'' to complement the existing VaR Floor calculation in the MBSD Rules. The Minimum Margin Amount would enhance backtesting coverage when there are potential VaR model performance challenges particularly when TBA price changes significantly exceed those implied by the VaR model risk factors as observed during March and April 2020.

The Minimum Margin Amount would be defined in the MBSD Rules as a minimum volatility calculation for specified net unsettled positions, calculated using the historical market price changes of such benchmark TBA securities determined by FICC. The definition would state that the Minimum Margin Amount would cover such range of historical market price moves and parameters as FICC from time to time deems appropriate using a look-back period of no less than one year and no more than three years.

FICC would set the range of historical market price moves and parameters from time to time in accordance with FICC's model risk management practices and governance set forth in the Clearing Agency Model Risk Management Framework (''Model Risk Management Framework'').[17] Under the proposed changes to the QRM Methodology, the Minimum Margin Amount would be computed through a dynamic haircut method that is based on observed TBA price moves that would provide a more reliable estimate for the portfolio risk level when current market conditions deviate from historical observations. The Minimum Margin Amount would also improve the responsiveness of the VaR model to a volatile market because it would have a shorter look back period from the VaR model.

The MBSD Rules currently define the VaR Floor as an amount designated by FICC that is determined by multiplying the sum of the absolute values of a Clearing Member's Long Positions and Short Positions, at market value, by a percentage designated by FICC that is no less than 0.05% and no greater than 0.30%.[18] FICC is proposing to revise the definition of the VaR Floor to incorporate the Minimum Margin Amount such that the VaR Floor would be the greater of (i) the VaR Floor Percentage Amount and (ii) the Minimum Margin Amount.

The ''VaR Floor Percentage Amount'' would be an amount derived using the current VaR Floor percentage calculation in the MBSD Rules: an amount designated by FICC that is determined by multiplying the sum of the absolute values of a Clearing Member's Long Positions and Short Positions, at market value, by a percentage designated by FICC that is no less than 0.05% and no greater than 0.30%. As with the existing VaR Floor percentage, FICC would determine the percentage within this range to be applied based on factors including but not limited to a review performed at least annually of the impact of the VaR Floor parameter at different levels within the range to the backtesting performance and to Clearing Members' margin charges. The VaR Floor percentage currently in place is 0.10%.

Likewise, as with the existing VaR Floor percentage, FICC would inform Clearing Members of the applicable percentage used in the VaR Floor Percentage Amount by Important Notice issued no later than 10 Business Days prior to implementation of such percentage. This rule change is not proposing to change the VaR Floor percentage or the manner in which this component is calculated.

The proposed Minimum Margin Amount would modify the VaR Floor to also cover circumstances where the market price volatility implied by the current VaR Charge calculation and the VaR Floor Percentage Amount is lower than market price volatility from corresponding price changes of the proposed TBA securities benchmarks observed during the lookback period. The proposed TBA securities benchmarks to be used in to calculate the Minimum Margin Amount in the QRM Methodology would be Federal National Mortgage Association (''Fannie Mae'') and Federal Home Loan Mortgage Corporation (''Freddie Mac'') conventional 30-year mortgage-backed securities (''CONV30''), Government National Mortgage Association (''Ginnie Mae'') 30-year mortgage-backed securities (''GNMA30''), Fannie Mae and Freddie Mac conventional 15-year mortgage-backed securities (''CONV15''), and Ginnie Mae 15-year mortgage-backed securities (''GNMA15''). These benchmarks were selected because they represent the majority of the trading volumes in the market.[19] This proposal would allow offsetting between short and long positions within TBA securities benchmarks given that the TBAs aggregated in each benchmark exhibit similar risk profiles and can be netted together to calculate the Minimum Margin Amount that will cover the observed market price changes for each portfolio.

FICC is proposing to modify the QRM Methodology to specify that the Minimum Margin Amount would be calculated per Clearing Member portfolio as follows: (i) risk factors would be calculated using historical market prices of benchmark TBA securities and (ii) each Clearing Member's portfolio exposure would be calculated on a net position across all products and for each securitization program (*i.e.,* CONV30, GNMA30, CONV15 and GNMA15). The Minimum Margin Amount would be calculated by multiplying a ''base risk factor'' (described below) by the absolute value of the Clearing Member's net position across all products, plus the sum of each risk factor spread to the base risk factor

[16] MBSD's monthly backtesting coverage ratios for Required Fund Deposit was 86.6% in March 2020 and 94.2% in April 2020.

[17] *See* Securities Exchange Act Release Nos. 81485 (August 25, 2017), 82 FR 41433 (August 31, 2017) (SR–DTC–2017–008; SR–FICC–2017–014; SR–NSCC–2017–008); 84458 (October 19, 2018), 83 FR 53925 (October 25, 2018) (SR–DTC–2018–009; SR–FICC–2018–010; SR–NSCC–2018–009) and 88911 (May 20, 2020), 85 FR 31828 (May 27, 2020) (SR–DTC–2020–008; SR–FICC–2020–004; SR–NSCC–2020–008) (''Model Risk Management Framework Filings''). The Model Risk Management Framework sets forth the model risk management practices adopted by FICC, National Securities Clearing Corporation, and The Depository Trust Company. The Model Risk Management Framework is designed to help identify, measure, monitor, and manage the risks associated with the design, development, implementation, use, and validation of quantitative models. The Model Risk Management Framework describes (i) governance of the Model Risk Management Framework; (ii) key terms; (iii) model inventory procedures; (iv) model validation procedures; (v) model approval process; and (vi) model performance procedures.

[18] *See* definition of VaR Charge, MBSD Rule 1, *supra* note 4.

[19] FICC plans to map 10-year and 20-year TBA to the corresponding 15-year TBA security benchmark. As of August 31, 2020, 20-year TBAs account for less than 0.5%, and 10-year TBAs account for less than 0.1%, of the positions in MBSD clearing portfolios. In the QRM Methodology, these TBAs are not selected as separate TBA security benchmarks due to the limited trading volumes in the market. FICC will continue to monitor the position exposures in MBSD and determine if a modification to the QRM Methodology may be required.

multiplied by the absolute value of its corresponding position.

Pursuant to the QRM Methodology, FICC calculates an outright risk factor for GNMA30 and CONV30. The base risk factor for a portfolio for the Minimum Margin Amount would be based on whether GNMA30 or CONV30 constitutes the larger absolute net market value in each Clearing Member's portfolio. If GNMA30 constitute the larger absolute net market value in the portfolio, the base risk factor would be equal to the outright risk factor for GNMA30. If CONV30 constitute the larger absolute new market value in the portfolio, the base risk factor would be equal to the outright risk factor for the CONV30.[20] GNMA30 and CONV30 are used as the baseline programs for determining the base risk factors because those programs constitute the majority part of the TBA market and the majority of positions in MBSD portfolios.

The proposed benchmark TBA securities, historical market price moves and parameters to be used to calculate the Minimum Margin Amount would be determined by FICC from time to time in accordance with FICC's model risk management practices and governance set forth in the Clearing Agency Model Risk Management Framework.[21]

FICC is proposing to introduce the Minimum Margin Amount to complement the VaR Floor during market conditions when the TBA prices are driven by factors outside of those implied by the VaR model. The Minimum Margin Amount would use observable TBA prices and would be calculated with a shorter lookback period than the VaR model so it would be more responsive to current market conditions. This proposal provides a more transparent and market price sensitive approach than alternatives, such as a VaR model parameter adjustment and VaR model add-on, would provide to Clearing Members.[22]

The lookback period of the Minimum Margin Amount is intended to be shorter than the lookback period used for the VaR model, which is 10 years, plus, to the extent applicable, one stressed period.[23] The lookback period of the Minimum Margin Amount would be between one to three years. Consistent with the VaR methodology outlined in the QRM Methodology and pursuant to the model performance monitoring required under the Model Risk Management Framework,[24] the lookback period would be analyzed to evaluate its sensitivity and impact to the model performance under four distinctive market regimes, epitomized by recent observations: (i) Calm markets where the VaR coverage is above 99% (*e.g.* 2018); (ii) moderately volatile markets or external mortgage market events (*e.g.* summer 2013; summer 2019); (iii) at the beginning of extreme market volatility (*e.g.,* 2007; COVID–19 in March), and (iv) post extreme market stress and mean-reverting to 'normal' market conditions. The lookback parameter in general affects (i) whether and how the floor will be invoked; (ii) the peak level of margin increase or the degree of procyclicality; and (iii) how quickly the margin will fall back to pre-stress levels. The lookback parameter update is intended to be an infrequent event and would typically happen only when there is a market regime change. The decision to update the lookback parameter would be based on the above-mentioned sensitivity analysis with considerations to the impacts to both the VaR Charges and the backtesting performance. The shorter lookback would more accurately reflect recent market conditions and would provide more responsiveness to market condition changes. The initial default lookback period for the Minimum Margin Amount calculation would be two years but may be adjusted as set forth above in accordance with FICC's model risk management practices and governance set forth in the Model Risk Management Framework.[25]

The Model Risk Management Framework would also require FICC to conduct model performance reviews of the Minimum Margin Amount methodology.[26] Specifically, FICC would monitor each Clearing Member's Required Fund Deposit and the aggregate Clearing Fund requirements versus the requirements calculated by the Minimum Margin Amount. In order to apply the risk management principles and model performance monitoring required under the Model Risk Management Framework, FICC's current model risk management practices would provide for a review of the robustness of the Required Fund Deposit inclusive of the Minimum Margin Amount by comparing the results versus the three-day profit and loss of each Clearing Member's margin portfolio based on actual market price moves. If the backtesting results of Required Fund Deposit inclusive of the Minimum Margin Amount did not meet FICC's 99% confidence level, FICC could consider adjustments to the Minimum Margin Amount, including changing the look-back period (as discussed above) and/or applying a historical stressed period to the Minimum Margin Amount calibration, as appropriate. Any adjustment to the Minimum Margin Amount calibration would be subject to the model risk management practices and governance process set forth in the Model Risk Management Framework.[27]

A. Proposed MBSD Rule Changes

In connection with incorporating the Minimum Margin Amount, FICC would modify the MBSD Rules to:

- Add a definition of ''Minimum Margin Amount'' and define it as a minimum volatility calculation for specified net unsettled positions of a Clearing Member, calculated using the historical market price changes of such benchmark TBA securities determined

[20] To illustrate the Minimum Margin Amount calculation, consider an example where a Clearing Member has a portfolio with a net long position across all products of $2 billion and CONV30 constitutes the larger absolute net market value in its portfolio as between GNMA30 and CONV30. Assume that the outright risk factor for CONV30 is 0.0096. Further assume the Clearing Member has a net short position of $30 million in CONV15, and the corresponding risk factor spread to the base risk factor is 0.006; a net short position of $500 million in GNMA30, and the corresponding risk factor spread is 0.005; and a net long position of $120 million in GNMA15, and the corresponding risk factor spread is 0.007. In order to generate the Minimum Margin Amount, FICC would multiply the base risk factor by the absolute value of the Clearing Member's net position across all products, plus the sum of each risk factor spread of the subsequent products multiplied by absolute value of the position for the respective product (*i.e.,* ([base risk factor]*ABS[portfolio net position]) + ([CONV15 spread risk factor] * ABS[CONV15 net position]) + ([GNMA30 spread risk factor] * ABS[GNMA30 net position]) + ([GNMA15 Spread Risk Factor] * ABS[GNMA15 net position])). The resulting Minimum Margin Amount would be $22.72 million.

[21] *See* Model Risk Management Framework, *supra* note 17.

[22] A VaR model parameter adjustment or a VaR model add-on would be implemented by estimating how much the VaR model should be modified to correspond to the current market price volatility. A parameter adjustment would be a modification to one or more VaR model risk factors while an add-on would be a percentage adjustment to the calculated VaR.

[23] FICC maintains the ability to include an additional period of historically observed stressed market conditions to a 10-year look-back period if FICC observes that (1) the results of the model performance monitoring are not within FICC's 99th percentile confidence level or (2) the 10-year look-back period does not contain sufficient stressed market conditions.

[24] The Model Risk Management Framework provides that all models undergo ongoing model performance monitoring and backtesting which is the process of (i) evaluating an active model's ongoing performance based on theoretical tests, (ii) monitoring the model's parameters through the use of threshold indicators, and/or (iii) backtesting using actual historical data/realizations to test a VaR model's predictive power. *See* Model Risk Management Framework Filings, *supra* note 17.

[25] *See* Model Risk Management Framework, *supra* note 17.

[26] *See* note 24.

[27] *See* Model Risk Management Framework, *supra* note 17.

by FICC. The definition would specify that the Minimum Margin Amount shall cover such range of historical market price moves and parameters as the Corporation from time to time deems appropriate using a look-back period of no less than one year and no more than three years;

• add a definition of ''VaR Floor Percentage Amount'' which would be defined substantially the same as the current calculation for the VaR Floor percentage with non-substantive modifications to reflect that the calculated amount is a separate defined term; and

• move the defined term VaR Floor out of the definition of VaR Charge and define it as the greater of (i) the VaR Floor Percentage Amount and (ii) the Minimum Margin Amount.

B. Proposed QRM Methodology Changes

In connection with incorporating the Minimum Margin Amount, FICC would modify the QRM Methodology to:

• Describe how the Minimum Margin Amount, as defined in the MBSD Rules, would be calculated, including

• establishing CONV30, GNMA30, CONV15 and GNMA15 as proposed TBA securities benchmarks for purposes of the calculation and calculating risk factors using historical market prices of such benchmark TBA securities;

• using a dynamic haircut method that allows offsetting between short and long positions within a program and among different programs; and

• multiplying a ''base risk factor'' (based on whether GNMA30 or CONV30 constitutes the larger absolute net market value in each Clearing Member's portfolio) by the absolute value of the Clearing Member's net position across all products, plus the sum of each risk factor spread to the base risk factor multiplied by the absolute value of its corresponding position;

• describe the developmental evidence and impacts to backtesting performance and margin charges relating to Minimum Margin Amount; and

• make certain technical changes to the QRM Methodology to re-number sections and tables, and update certain section titles as necessary, to add a new section that describes the proposed Minimum Margin Amount and the selection of benchmarks.

C. Impact Studies

FICC performed an impact study on Clearing Members' portfolios for the period beginning February 3, 2020 through June 30, 2020 (''Impact Study Period'). If the proposed rule changes had been in place during the Impact Study Period compared to the existing MBSD Rules:

• Aggregate average daily aggregate VaR Charges would have increased by approximately $2.2 billion or 42%; and

• aggregate average daily Backtesting Charges would have decreased by approximately $450 million or 53%.

Impact studies also indicated that if the proposed rule changes had been in place, overall margin backtesting coverage (based on 12-month trailing backtesting) would have increased from approximately 99.3% to 99.6% through January 31, 2020 and approximately 97.3% to 98.5% through June 30, 2020.

D. Impacts to Clearing Members Over the Impact Study Period

On average, at the Clearing Member level, the Minimum Margin Amount would have increased the VaR Charge by $27 million over the Impact Study Period. The largest percent increase in VaR Charge for any Clearing Member would have been 146%, or $22 million. The largest dollar increase for any Clearing Member would have been $333 million, or 37% increase in the VaR Charge. The top 10 Clearing Members based on the size of their VaR Charges would have contributed 69.3% of the aggregate VaR Charges during the Impact Study Period had the Minimum Margin Amount been in place. The same Clearing Members would have contributed to 54% of the increase resulting from the Minimum Margin Amount during the Impact Study Period.

The portfolios that would have observed large percent increases were largely made up with concentrations in higher coupon TBAs and GNMA positions. However, no Clearing Members would have triggered the Excess Capital Premium charge [28] due to the increase in Required Fund Deposits resulting from the Minimum Margin Amount during the Impact Study Period.

(iii) Implementation Timeframe

FICC would implement the proposed changes no later than 20 Business Days after the later of the approval of the proposed rule change and no objection to the related advance notice [29] by the Commission. FICC would announce the effective date of the proposed changes by Important Notice posted to its website.

2. Statutory Basis

FICC believes that this proposal is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a registered clearing agency. Specifically, FICC believes that this proposal is consistent with Section 17A(b)(3)(F) of the Act [30] and Rules 17Ad–22(e)(4)(i) and (e)(6)(i), each promulgated under the Act,[31] for the reasons described below.

Section 17A(b)(3)(F) of the Act requires, in part, that the MBSD Rules be designed to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible.[32] FICC believes the proposed changes are designed to assure the safeguarding of securities and funds which are in its custody or control or for which it is responsible because they are designed to enable FICC to better limit its exposure to Clearing Members in the event of a Clearing Member default, as described below.

The Required Fund Deposits are made up of risk-based components (as margin) that are calculated and assessed daily to limit FICC's credit exposures to Clearing Members. FICC is proposing changes to the MBSD Rules and QRM Methodology that are designed to more effectively measure and address risk characteristics in situations where the risk factors used in the VaR method do not adequately predict TBA prices. The proposed changes above would adjust the VaR Floor to help ensure that FICC collects adequate margin from its Clearing Members, particularly in periods of high market volatility and economic uncertainty. During these periods, the existing VaR model has been shown to be inadequate based on backtesting performances. Backtesting percentages covering such periods indicate the risk that VaR Charges will be insufficient to manage risk in the event of a Clearing Member's default. FICC pays particular attention to Clearing Members with backtesting deficiencies that bring the results for that Clearing Member below the 99% confidence target to determine if there is an identifiable cause of repeat backtesting deficiencies. During the recent period of market volatility and economic uncertainty, there were numerous repeated backtesting deficiencies. The Minimum Margin Amount, to be defined in the MBSD Rules and further incorporated in the QRM Methodology as described herein, is a proposed targeted response to enhance the MBSD VaR model

[28] Excess Capital Premium is assessed when the Clearing Member's VaR Charge exceeds the Excess Capital it maintains.

[29] *Supra* note 3.

[30] 15 U.S.C. 78q–1(b)(3)(F).

[31] 17 CFR 240.17Ad–22(e)(4), (e)(6) and (e)(23)(ii).

[32] 15 U.S.C. 78q–1(b)(3)(F).

performance and improve the backtesting coverage during periods of heightened market volatility and economic uncertainty.

As a result of the recent market volatility and economic uncertainty, FICC's VaR model did not achieve a 99% confidence level for all Clearing Members in March and April 2020. The Minimum Margin Amount is intended to allow the VaR Charge to be more responsive during market conditions when the VaR model projections do not closely correspond with observed market price changes. Backtesting studies indicate that aggregate average daily aggregate VaR Charges would have increased by approximately $2.2 billion or 42%, average aggregate daily Backtesting Charges would have decreased by approximately $450 million or 53% during the Impact Study Period and the overall margin backtesting coverage (based on 12-month trailing backtesting) would have improved from approximately 97.3% to 98.5% through June 30, 2020 if the Minimum Margin Amount calculation had been in place. Improving the overall backtesting coverage level would help FICC ensure that it maintains an appropriate level of margin to address its risk management needs.

The use of the Minimum Margin Amount would reduce risk by allowing FICC to calculate the exposure in each portfolio using the risk spread based on observed TBA price moves of TBA positions within each portfolio. As reflected by backtesting studies during the Impact Study Period, using observed market prices of such benchmark TBA securities to set risk exposure would provide a more reliable estimate than the FICC VaR historical data set for the portfolio risk level when current market conditions deviate from historical observations. This proposal would allow offsetting between short and long positions within TBA securities benchmarks given that the TBAs aggregated in each benchmark exhibit similar risk profiles and can be netted together to calculate the Minimum Margin Amount that will cover the observed market price changes for each portfolio. Adding the Minimum Margin Amount to the VaR Floor would help to ensure that the risk exposure during periods of market volatility and economic uncertainty is adequately captured in the VaR Charges. FICC believes that would help to ensure that FICC continues to accurately calculate and assess margin and in turn, collect sufficient margin from its Clearing Members and better enable FICC to limit its exposures that could be incurred when liquidating a portfolio.

FICC believes the proposed technical changes to the QRM Methodology described above would enhance the clarity of the QRM Methodology for FICC. Having a clear and accurate methodology document, which describes how the Minimum Margin Amount would be calculated and the selection of benchmarks, that the Minimum Margin Amount would be included within the calculation of the VaR Charges and the developmental evidence and impacts to backtesting performance and margin charges, would help to ensure that FICC continues to accurately calculate and assess margin and in turn, collect sufficient margin from its Clearing Members and better enable FICC to limit its exposures that could be incurred when liquidating a portfolio.

By better enabling FICC to limit its exposure to Clearing Members, the proposed changes to the MBSD Rules and QRM Methodology are designed to better ensure that, in the event of a Clearing Member default, FICC would have adequate margin from the defaulting Clearing Member and non-defaulting Clearing Members would not be exposed to losses they cannot anticipate or control. Therefore, the proposed changes would be designed to assure the safeguarding of securities and funds which are in the custody or control of FICC or for which it is responsible, consistent with Section 17A(b)(3)(F) of the Act.[33]

Rule 17Ad–22(e)(4)(i) under the Act[34] requires a covered clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to effectively identify, measure, monitor, and manage its credit exposures to participants and those exposures arising from its payment, clearing, and settlement processes by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. As described above, FICC believes that the proposed changes would enable it to better identify, measure, monitor, and, through the collection of Clearing Members' Required Fund Deposits, manage its credit exposures to Clearing Members by maintaining sufficient resources to cover those credit exposures fully with a high degree of confidence. More specifically, as indicated by backtesting studies, implementation of a Minimum Margin Amount by changing the MBSD Rules and QRM Methodology as described herein would allow FICC to limit its credit exposures to Clearing Members in the event that the current VaR model yields too low a VaR Charge for such portfolios and improve backtesting performance. As indicated by the backtesting studies, aggregate average daily aggregate VaR Charges would have increased by approximately $2.2 billion or 42%, average aggregate daily Backtesting Charges would have decreased by approximately $450 million or 53% during the Impact Study Period and the overall margin backtesting coverage (based on 12-month trailing backtesting) would have improved from approximately 97.3% to 98.5% through June 30, 2020 if the Minimum Margin Amount calculation had been in place. By identifying and providing for appropriate VaR Charges, adding the Minimum Margin Amount to the VaR Floor would help to ensure that the risk exposure during periods of market volatility and economic uncertainty is adequately identified, measured and monitored. As a result, FICC believes that the proposal would enhance FICC's ability to effectively identify, measure and monitor its credit exposures and would enhance its ability to maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence, consistent with the requirements of Rule 17Ad–22(e)(4)(i) of the Act.[35]

Rule 17Ad–22(e)(6)(i) under the Act[36] requires a covered clearing agency to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market. FICC believes that the proposed changes to adjust the VaR Floor to include the Minimum Margin Amount by changing the MBSD Rules and QRM Methodology as described herein are consistent with the requirements of Rule 17Ad–22(e)(6)(i) cited above. The Required Fund Deposits are made up of risk-based components (as margin) that are calculated and assessed daily to limit FICC's credit exposures to Clearing Members. FICC is proposing changes that are designed to more effectively measure and address risk characteristics in situations where the risk factors used in the VaR method do not adequately predict TBA prices. As reflected in backtesting studies, FICC believes the proposed changes would appropriately

[33] *Id.*

[34] *See* 17 CFR 240.17Ad–22(e)(4)(i).

[35] *Id.*

[36] *See* 17 CFR 240.17Ad–22(e)(6)(i).

limit FICC's credit exposure to Clearing Members in the event that the VaR model yields too low a VaR Charge in such situations. Such backtesting studies indicate that aggregate average daily aggregate VaR Charges would have increased by approximately $2.2 billion or 42%, aggregate average daily Backtesting Charges would have decreased by approximately $450 million or 53% during the Impact Study Period and the overall margin backtesting coverage (based on 12-month trailing backtesting) would have improved from approximately 97.3% to 98.5% through June 30, 2020 if the Minimum Margin Amount calculation had been in place. By identifying and providing for appropriate VaR Charges, adding the Minimum Margin Amount to the VaR Floor would help to ensure that margin levels are commensurate with the risk exposure of each portfolio during periods of market volatility and economic uncertainty. The proposed changes would therefore allow FICC to continue to produce margin levels commensurate with the risks and particular attributes of each relevant product, portfolio, and market. As such, FICC believes that the proposed changes are consistent with the requirements of Rule 17Ad–22(e)(6)(i) of the Act.[37]

(B) Clearing Agency's Statement on Burden on Competition

FICC believes the proposed rule changes to modify the VaR Floor to incorporate a Minimum Margin Amount as described above could impose a burden on competition. As a result of the incorporation of the Minimum Margin Amount, Clearing Members may experience increases in their Required Fund Deposits. An impact study during the Impact Study Period indicates that on average each Clearing Member would have had an increase in VaR Charge of approximately 42%. Impact studies also indicate that the proposed changes could impact each Clearing Member in a different manner compared to other Clearing Members depending on the products in such Clearing Member's portfolio. Clearing Members with higher percentages of higher coupon TBAs in their portfolios, are more likely to be impacted by the proposed changes. Such increases could burden Clearing Members that have lower operating margins or higher costs of capital than other Clearing Members. It is not clear whether the burden on competition would necessarily be significant because it would depend on whether the affected Clearing Members were similarly situated in terms of business type and size. Regardless of whether the burden on competition is significant, FICC believes that any burden on competition would be necessary and appropriate in furtherance of the purposes of the Act.

Specifically, FICC believes that the proposed rule changes would be necessary in furtherance of the Act, as described in this filing and further below. FICC believes that the above described burden on competition that may be created by the proposed changes to incorporate a Minimum Margin Amount in the VaR Floor is necessary, because the MBSD Rules must be designed to assure the safeguarding of securities and funds that are in FICC's custody or control or which it is responsible, consistent with Section 17A(b)(3)(F). As described above, FICC believes that the use of the Minimum Margin Amount would reduce risk by allowing FICC to calculate the exposure in each portfolio using the risk spread based on observed TBA price moves of TBA positions within each portfolio and provide a more reliable estimate than the FICC VaR historical data set for the portfolio risk level when current market conditions deviate from historical observations. Accurately calculating and assessing margin and in turn, collecting sufficient margin from its Clearing Members would better enable FICC to limit its exposures that could be incurred when liquidating a portfolio. By better enabling FICC to limit its exposure to Clearing Members, the proposed changes to the MBSD Rules and QRM Methodology are designed to better ensure that, in the event of a Clearing Member default, FICC would have adequate margin from the defaulting Clearing Member and non-defaulting Clearing Members would not be exposed to losses they cannot anticipate or control. Therefore, the proposed changes would be designed to assure the safeguarding of securities and funds which are in the custody or control of FICC or for which it is responsible, consistent with Section 17A(b)(3)(F) of the Act.

FICC also believes these proposed changes are necessary to support FICC's compliance with Rules 17Ad–22(e)(4)(i) and Rule 17Ad–22(e)(6)(i) under the Act,[38] which require FICC to establish, implement, maintain and enforce written policies and procedures reasonably designed to (x) effectively identify, measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes, including by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence and (y) cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.

As described above, FICC believes that implementing the Minimum Margin Amount into the VaR Floor would allow FICC to more effectively measure and address risk characteristics in situations where the risk factors used in the VaR method do not adequately predict TBA prices, particularly in periods of high volatility and economic uncertainty. FICC's existing VaR model did not respond effectively to the recent levels of market volatility and economic uncertainty, and the VaR Charge amounts that were calculated using the profit and loss scenarios generated by FICC's VaR model did not achieve a 99% confidence level beginning in mid-March 2020. In addition, the VaR Floor did not effectively address the risk that the VaR model calculated too low a VaR Charge for all portfolios. As reflected in backtesting studies during the Impact Study Period, FICC believes the proposed changes would appropriately cover FICC's credit exposure to Clearing Members with a high degree of confidence in the event that the VaR model yields too low a VaR Charge in such situations. The proposed rule changes would limit FICC's exposure to Clearing Members by ensuring that each Clearing Member has an appropriate minimum VaR Charge in the event that the VaR model yields too low a VaR Charge for such portfolios. By identifying and providing for appropriate VaR Charges, adding the Minimum Margin Amount to the VaR Floor would help to ensure that margin levels are commensurate with the risk exposure of each portfolio during periods of market volatility and economic uncertainty. Therefore, FICC believes that these proposed changes would allow FICC to effectively identify, measure, monitor, and manage its credit exposures to Clearing Members and better limit FICC's credit exposures to Clearing Members by maintaining sufficient financial resources to cover its credit exposure to each Clearing Member fully with a high degree of confidence and producing margin levels commensurate with, the risks and particular attributes of each relevant product and portfolio, consistent with the requirements of

[37] *Id.*

[38] 17 CFR 240.17Ad–22(e)(4)(i), (e)(6)(i).

Rules 17Ad–22(e)(4)(i) and Rule 17Ad–22(e)(6)(i) under the Act. [39]

FICC also believes that the above described burden on competition that could be created by the proposed changes would be appropriate in furtherance of the Act because such changes have been appropriately designed to assure the safeguarding of securities and funds which are in the custody or control of FICC or for which it is responsible, as described in detail above. The proposed change to incorporate the Minimum Margin Amount would enable FICC to produce margin levels more commensurate with the risks and particular attributes of each Clearing Member's portfolio. Any increase in Required Fund Deposit as a result of such proposed changes for a particular Clearing Member would be in direct relation to the specific risks presented by such Clearing Members' portfolio, and each Clearing Member's Required Fund Deposit would continue to be calculated with the same parameters and at the same confidence level. Therefore, Clearing Members with portfolios that present similar risks, regardless of the type of Clearing Member, would have similar impacts on their Required Fund Deposit amounts. In addition, the proposed changes would improve the risk-based margining methodology that FICC employs to set margin requirements and better limit FICC's credit exposures to its Clearing Members. Impact studies indicate that the proposed methodology would result in backtesting coverage that more appropriately addresses the risks presented by each portfolio. Therefore, because the proposed changes are designed to provide FICC with a more appropriate and complete measure of the risks presented by Clearing Members' portfolios, FICC believes the proposals are appropriately designed to meet its risk management goals and its regulatory obligations.

Therefore, FICC does not believe that the proposed changes would impose any burden on competition that is not necessary or appropriate in furtherance of the Act.[40]

(C) Clearing Agency's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments relating to the proposed rule changes have not been solicited or received. FICC will notify the Commission of any written comments received by FICC.

[39] *Id.*

[40] 15.U.S.C. 78q–1(b)(3)(I).

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 self-regulatory organization 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.

The proposal shall not take effect until all regulatory actions required with respect to the proposal are completed.

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 (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–FICC–2020–017 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549.

All submissions should refer to File Number SR–FICC–2020–017. 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 (*http://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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of FICC and on DTCC's website (*http://dtcc.com/legal/sec-rule-filings.aspx*). All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–FICC–2020–017 and should be submitted on or before December 31, 2020.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[41]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2020–27087 Filed 12–9–20; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–90569; File No. SR-CboeBZX–2020–088]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend Its Fee Schedule To Update the Add Volume Tiers, To Eliminate the Remove Volume Tier, and To Eliminate Unused Fee Codes

December 4, 2020.

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 December 2, 2020, Cboe BZX Exchange, Inc. (the ''Exchange'' or ''BZX'') 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 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. (the ''Exchange'' or ''BZX'') is filing with the Securities and Exchange Commission (''Commission'') a proposed rule change to amend the fee schedule. The text of

[41] 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 is provided in Exhibit 5.

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.

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 amend its fee schedule applicable to its equities trading platform (''BZX Equities'') to: (1) Update the Add Volume Tiers, (2) eliminate the Remove Volume Tier, and (3) eliminate unused fee codes.[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 is only one of 16 registered equities exchanges, as well as a number of alternative trading systems and other off-exchange venues that do not have similar self-regulatory responsibilities under the Exchange Act, to which market participants may direct their order flow. Based on publicly available information,[4] no single registered equities exchange has more than 16% of the market share. Thus, in such a low-concentrated and highly competitive market, no single equities exchange possesses significant pricing power in the execution of order flow. The Exchange in particular operates a ''Maker-Taker'' model whereby it pays credits to members that provide liquidity and assesses fees to those that remove liquidity. The Exchange's fee schedule sets forth the standard rebates and rates applied per share for orders that provide and remove liquidity, respectively. Currently, for orders priced at or above $1.00, the Exchange provides a standard rebate of $0.0020 per share for orders that add liquidity and assesses a fee of $0.0030 per share for orders that remove liquidity and orders that are routed. For orders priced below $1.00, the Exchange provides a standard rebate of $0.0009 per share for orders that add liquidity and assesses a fee of 0.30% of total dollar value for orders that remove liquidity and for orders that are routed. Additionally, in response to the competitive environment, the Exchange also offers tiered pricing which provides Members opportunities to qualify for higher rebates or reduced fees where certain volume criteria and thresholds are met. Tiered pricing provides an incremental incentive for Members to strive for higher tier levels, which provides increasingly higher benefits or discounts for satisfying increasingly more stringent criteria.

Proposed Updates to the Add Volume Tiers

The Exchange currently offers six Add Volume Tiers under footnote 1 of the Fee Schedule. The Add Volume Tiers provide Members with opportunities to receive incrementally increasing enhanced rebates for their liquidity adding orders that yield fee codes ''B''[5], ''V''[6], and ''Y''[7], upon reaching incrementally more difficult criteria under each tier. The Exchange proposes to amend Tier 1 and remove Tier 3 (and renumber the remaining tiers accordingly).

Particularly Tier 1 offers an enhanced rebate of $0.0025 for qualifying orders (*i.e.,* yielding fee codes B, V or Y) where a Member has an ADAV[8] greater or equal to 1,000,000. The Exchange proposes to increase the ADAV requirement to 3,000,000. The Exchange notes Tier 1, as modified, continues to be available to all Members and provide Members an opportunity to receive an enhanced rebate, albeit using a more stringent criteria. Moreover, the proposed change is designed to encourage Members to increase order flow on the Exchange in order to receive the corresponding rebate, which further contributes to a deeper, more liquid market and provides even more execution opportunities for active market participants at improved prices.

Tier 3 offers an enhanced rebate of $0.0028 for qualifying orders where a Member has an ADAV as a percentage of TCV greater than or equal to 0.20%. The Exchange proposes to eliminate the 3 Tier as it no longer wishes to, nor is it required to, maintain such tier. More specifically, the proposed rule change removes this tier as the Exchange would rather redirect resources and funding into other programs and tiers intended to incentivize increased order flow.

Remove Volume Tier

The Exchange also proposes to eliminate Remove Volume Tier, which offers a reduced fee of $0.0029 for orders in securities at or above $1.00 and 0.28% of total dollar value for orders in securities below $1.00 yielding fee code ''N'', ''W'' and ''BB'' where a Member has an ADAV greater than or equal to 0.20% TCV with displayed orders that yield fee codes B, V or Y. The Exchange proposes to eliminate the Remove Volume Tier as it no longer wishes to, nor is it required to, maintain such tier. More specifically, the proposed rule change removes this tier as the Exchange would rather redirect resources and funding into other programs and tiers intended to incentivize increased order flow.

Elimination of Certain Routing Fee Codes

The Exchange assesses fees in connection with orders routed away to various exchanges. The Exchange proposes to eliminate several routing-related fee codes that have been unused for several years. Particularly, the Exchange proposes to eliminate the following fee codes:

- Fee Code 9, which is appended to orders routed to NYSE Arca and adds liquidity (Tapes A or C) and provides a rebate of $0.00210 per share for securities priced at or above $1.00 and are free for securities priced below $1.00;
- Fee Code NB, which is appended to orders routed to any exchange not covered by Fee Code NA and adds non-displayed liquidity and assesses a fee of $0.00300 per share for securities priced at or above $1.00 and a fee of 0.30% of dollar value for securities priced below $1.00;

[3] The Exchange initially filed the proposed fee changes on December 1, 2020 (SR-CboeBZX–2020–087). On December 2, 2020, the Exchange withdrew that filing and submitted this proposal.

[4] *See* Cboe Global Markets, U.S. Equities Market Volume Summary, Month-to-Date (November 27, 2020), available at *https://markets.cboe.com/us/equities/market_statistics/.*

[5] Appended to displayed orders that adds liquidity to BZX (Tape B) and is assessed a standard rebate of $0.0025.

[6] Appended to displayed orders that adds liquidity to BZX (Tape A) and is assessed a standard rebate of $0.0025.

[7] Appended to displayed orders that adds liquidity to BZX (Tape C) and is assessed a standard rebate of $0.0025.

[8] ''ADAV'' means average daily added volume calculated as the number of shares added per day. ADAV is calculated on a monthly basis.

• Fee Code R, which is appended to orders re-routed by NYSE and assesses a fee of 0.00300 per share;

• Fee Code RA, which is appended to orders re-routed to EDGA and adds liquidity and assess a fee of 0.00300 per share for securities priced at or above $1.00 and are free for securities priced below $1.00; and

• Fee Code RB, which is appended to orders routed to BX and adds liquidity and assess a fee of 0.00200 per share for securities priced at or above $1.00 and are free for securities priced below $1.00.

As noted, above the Exchange has observed no volume in recent years in orders yielding fee codes 9, NB, R, RA and RB. The Exchange believes that because no Members elect to route their orders that yield these fee codes, the current demand (or lack thereof) does not warrant the infrastructure and ongoing Systems maintenance required to support separate fee codes specifically applicable to these types of transactions. Therefore, the Exchange now proposes to delete fee codes 9, NB, R, RA and RB in the Fee Schedule. The Exchange notes that Members will continue to be able to choose to route their orders to any exchange covered by these fee codes and such orders will be automatically and uniformly assessed the current fees (or rebates) in place for routed orders, as applicable (*e.g.,* the standard fees applied to routed orders, which yields fee code X).

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[9] in general, and furthers the objectives of Section 6(b)(4),[10] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members, issuers and other persons using its facilities. 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 proposed rule changes reflect a competitive pricing structure designed to incentivize market participants to direct their order flow to the Exchange, which the Exchange believes would enhance market quality to the benefit of all Members. The Exchange notes that relative volume-based incentives and discounts have been widely adopted by exchanges, including the Exchange, and are reasonable, equitable and non-discriminatory because they are open to all members on an equal basis and provide additional benefits or discounts that are reasonably related to (i) the value to an exchange's market quality and (ii) associated higher levels of market activity, such as higher levels of liquidity provision and/or growth patterns. Additionally, as noted above, the Exchange operates in highly competitive market. The Exchange is only one of several equity venues to which market participants may direct their order flow, and it represents a small percentage of the overall market. It is also only one of several maker-taker exchanges. Competing equity exchanges offer similar tiered pricing structures, including schedules of rebates and fees that apply based upon members achieving certain volume and/or growth thresholds, as well as assess similar fees or rebates for similar types of orders, to that of the Exchange. These competing pricing schedules, moreover, are presently comparable to those that the Exchange provides, including the pricing of comparable criteria and/or fees and rebates.

In particular, the Exchange believes the proposed changes to Tier 1 is reasonable because Tier 1 as modified continues to be available to all Members and provides Members an opportunity to receive an enhanced rebate, albeit using more stringent criteria. The Exchange next notes that relative volume-based incentives and discounts have been widely adopted by exchanges, including the Exchange, and are reasonable, equitable and non-discriminatory because they are open to all Members on an equal basis and provide additional benefits or discounts that are reasonably related to (i) the value to an exchange's market quality and (ii) associated higher levels of market activity, such as higher levels of liquidity provision and/or growth patterns. The Exchange is only one of several equity venues to which market participants may direct their order flow, and it represents a small percentage of the overall market. It is also only one of several maker-taker exchanges. Competing equity exchanges offer similar tiered pricing structures to that of the Exchange, including schedules of rebates and fees that apply based upon members achieving certain volume thresholds.[11] These competing pricing schedules, moreover, are presently comparable to those that the Exchange provides, including the pricing of comparable tiers.

The Exchange also notes that the enhanced rebate available under Tier 1 is not changing and further believes that the current enhanced rebate continues to be commensurate with the required criteria, even as amended. Furthermore, the Exchange believes the enhanced rebates under each Add Volume Tier continue to reasonably reflect the difficulty in achieving the corresponding criteria, even as amended.

The Exchange believes the proposed change is also a reasonable means to incentivize Members to continue to provide liquidity adding, displayed volume, which will benefit all market participants by incentivizing continuous liquidity and thus, deeper more liquid markets as well as increased execution opportunities. This overall increase in activity deepens the Exchange's liquidity pool, offers additional cost savings, supports the quality of price discovery, promotes market transparency and improves market quality, for all investors.

Without having a view of activity on other markets and off-exchange venues, the Exchange has no way of knowing whether this proposed rule change would definitely result in any Members qualifying for the proposed amended tier. The Exchange notes that most recently, eleven Members satisfied Tier 1. While the Exchange has no way of predicting with certainty how the proposed tier will impact Member activity, the Exchange anticipates that approximately three Members will be able to satisfy Tier 1 as amended. The Exchange also notes that the proposed amended tier will not adversely impact any Member's ability to qualify for other rebate tiers. Rather, should a Member not meet the criteria for Tier 1, as amended, the Member will merely not receive the corresponding proposed enhanced rebate. Furthermore, the proposed rebate would uniformly apply to all Members that meet the required criteria.

The Exchange also believes the proposal to remove Add Volume Tier 3 is reasonable because the Exchange is not required to maintain this tier and Members still have a number of other opportunities and a variety of ways to receive enhanced rebates for displayed adding liquidity orders, including via the existing add volume tiers. The Exchange believes the proposal to eliminate this tier is also equitable and not unfairly discriminatory because it applies to all Members (*i.e.,* the tier won't be available for any Member). The Exchange notes that recently two

[9] 15 U.S.C. 78f.

[10] 15 U.S.C. 78f(b)(4).

[11] *See, e.g.,* Cboe EDGX Equities Fees Schedule, Footnote 1 which provides various Add Volume Tiers.

Members had satisfied the criteria of Add Volume Tier 3. The Exchange also notes that the proposed change does not preclude any Member, including the Members that were receiving the rebates under this tier, from achieving the remaining add volume tiers to qualify for the remaining enhanced rebates or other available enhanced rebates under other incentive tiers.[12] Additionally, those Members are still entitled to a rebate for its displayed orders adding liquidity (*i.e.,* the standard rebate), albeit a rebate that is lower than the amount under Add Volume Tier 3. The Exchange also notes that the proposed rule change to remove Add Volume Tier 3 merely results in Members not receiving the enhanced rebate, which as noted above, the Exchange is not required to offer or maintain.

Similarly, the Exchange believes the proposal to eliminate the Remove Volume Tier is reasonable because the Exchange is not required to maintain this tier or provide Members an opportunity to receive reduced fees. The Exchange believes the proposal to eliminate this tier is also equitable and not unfairly discriminatory because it applies to all Members (*i.e.,* the tier won't be available for any Member). The Exchange notes that recently seven Members had satisfied the criteria of Remove Volume Tier. The Exchange also notes that the proposed rule change to remove the Remove Volume Tier merely results in Members not receiving a reduced fee, which as noted above, the Exchange is not required to offer or maintain. Furthermore, the proposed rule change to eliminate both the Add Volume Tier 3 and the Remove Volume Tier enables the Exchange to redirect resources and funding into other programs and tiers intended to incentivize increased order flow.

The Exchange also believes the proposed rule change to remove fee codes 9, NB, R, RA and RB is reasonable as the Exchange has observed no volume in orders yielding these fee codes and, therefore, the Exchange believes the proposed change will have a de minimis impact. Additionally, the Exchange believes that infrastructure and ongoing Systems maintenance required to support separate fee codes specifically applicable to these types of routed orders is not warranted or necessary in light of the fact that it has not received any recent volume yielding these fee codes. As noted above, to the extent volume for transactions currently covered by these fee codes ever increases, such orders will be automatically and uniformly assessed the current fees (or rebates) in place for routed orders, as applicable (*e.g.,* the standard fees applied to routed orders, which yield fee code X). Finally, the Exchange believes that the proposed elimination of the fee codes is equitable and not unfairly discriminatory as it applies equally to all members that use the Exchange to route orders. If members do not favor the Exchange's pricing for routed orders, they can send their routable orders directly to away markets instead of using routing functionality provided by the Exchange. Routing through the Exchange is voluntary, and the Exchange operates in a competitive environment where market participants can readily direct order flow to competing venues or providers of routing services if they deem fee levels to be excessive.

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. Rather, as discussed above, the Exchange believes that the proposed change to Add Volume 1 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.'' [13]

The Exchange believes the proposed rule change does not impose any burden on intramarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. Particularly, the proposed changes apply to all Members equally in that all Members will continue to be eligible for Add Volume tier 1 and have a reasonable opportunity to meet the tier's criteria and will all receive the corresponding additional rebate if such criteria is met. Additionally, the proposed tier change is designed to attract additional order flow to the Exchange. The Exchange believes that the updated tier criteria would incentivize market participants to direct liquidity adding order flow to the Exchange, bringing with it additional execution opportunities for market participants and improved price transparency. Greater overall order flow, trading opportunities, and pricing transparency benefits all market participants on the Exchange by enhancing market quality and continuing to encourage Members to send orders, thereby contributing towards a robust and well-balanced market ecosystem. The Exchange does not believe the proposed rule change to eliminate Add Volume Tier 3, the Remove Volume Tier, and the unused routing fee codes will impose any burden on intramarket competition because it applies to all Members uniformly.

Next, the Exchange believes the proposed rule change does not impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the purposes of the Act. As previously discussed, the Exchange operates in a highly competitive market. Members have numerous alternative venues that they may participate on and direct their order flow, including 15 other equities exchanges and off-exchange venues and alternative trading systems. Additionally, the Exchange represents a small percentage of the overall market. Based on publicly available information, no single equities exchange has more than 16% of the market share. Therefore, no exchange possesses significant pricing power in the execution of order flow. Indeed, participants can readily choose to send their orders to other exchange and off-exchange venues if they deem fee levels at those other venues to be more favorable. Moreover, the Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Specifically, in Regulation NMS, 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.'' [14] The fact that this market is competitive has also long been recognized by the courts. In NetCoalition v. Securities and Exchange Commission, the D.C. Circuit stated as follows: ''[n]o one disputes that competition for order flow is 'fierce.' . . . As the SEC explained, '[i]n

[12] *See, e.g.,* Cboe BZX Equities Fee Schedule, Footnote 1, which provides various Add/Remove Volume Tiers applicable to fee codes B, V, and Y.

[13] Securities Exchange Act Release No. 51808, 70 FR 37495, 37498–99 (June 29, 2005) (S7–10–04) (Final Rule).

[14] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005).

the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers'. . . .''.[15] Accordingly, the Exchange does not believe its proposed fee change imposes any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

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

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [16] and paragraph (f) of Rule 19b–4 thereunder.[17] 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 will institute proceedings 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 (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR-CboeBZX–2020–088 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–2020–088. 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 (*http://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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-CboeBZX–2020–088 and should be submitted on or before December 31, 2020.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2020–27088 Filed 12–9–20; 8:45 am]

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[15] NetCoalition v. SEC, 615 F.3d 525, 539 (DC Cir. 2010) (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782–83 (December 9, 2008) (SR–NYSEArca-2006–21)).

[16] 15 U.S.C. 78s(b)(3)(A).

[17] 17 CFR 240.19b–4(f).

[18] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–90573; File No. SR-Phlx–2020–41]

Self-Regulatory Organizations; Nasdaq PHLX LLC; Order Instituting Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change To List and Trade Options on a Nasdaq-100 Volatility Index

December 4, 2020.

I. Introduction

On August 24, 2020, Nasdaq PHLX LLC (''Exchange'' or ''Phlx'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to list and trade options on a Nasdaq-100 Volatility Index (''VOLQ'' or ''Volatility Index''). The proposed rule change was published for comment in the **Federal Register** on September 8, 2020.[3] On October 20, 2020, pursuant to Section 19(b)(2) of the Act,[4] the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.[5] This order institutes proceedings under Section 19(b)(2)(B) of the Act [6] to determine whether to approve or disapprove the proposed rule change.

II. Description of and Comment on the Proposed Rule Change

A. Description of the Proposal

The Exchange proposes to list and trade options on VOLQ, a new index that measures changes in 30-day implied volatility of the Nasdaq-100 Index (''Nasdaq-100 Index'' or ''NDX''). As proposed, options on the VOLQ will be cash-settled and will have European-style exercise provisions. The Exchange states that the Volatility Index will measure ''at-the-money'' volatility. The Volatility Index, calculated using

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 89725 (September 1, 2020), 85 FR 55544 (''Notice''). Comment received on the Notice is available on the Commission's website at: *https://www.sec.gov/comments/sr-phlx-2020-41/srphlx202041.htm.*

[4] 15 U.S.C. 78s(b)(2).

[5] *See* Securities Exchange Act Release No. 90226, 85 FR 67781 (October 26, 2020). The Commission designated December 7, 2020 as the date by which the Commission shall approve or disapprove, or institute proceedings to determine whether to disapprove, the proposed rule change.

[6] 15 U.S.C. 78s(b)(2)(B).

published real-time bid/ask quotes of NDX options, represents 30-day implied volatility and will be disseminated in annualized percentage points.[7]

The Exchange proposes to list up to six weekly expirations and up to 12 standard (monthly) expirations in Volatility Index options. The six weekly expirations will be for the nearest weekly expirations from the actual listing date, and the weekly expirations will not expire in the same week in which standard (monthly) Volatility Index options expire. Standard (monthly) expirations in the Volatility Index options will not be counted as part of the maximum six weekly expirations permitted for Volatility Index options.[8] In addition, the Exchange proposes that long term option series having up to sixty months to expiration may be listed and traded.[9]

Volatility Index Design and Composition [10]

The Exchange states that the Volatility Index [11] reflects changes in 30-day implied volatility, which measures the magnitude of changes of the underlying broad-based securities index, NDX. The Exchange further states that NDX includes 100 of the largest [12] domestic and international non-financial companies listed on The Nasdaq Stock Market LLC based on market capitalization. According to the Exchange, the Volatility Index, which the Exchange considers a broad-based securities index pursuant to Phlx Options 4A, Section 2(a)(13),[13] measures the expectation for market volatility over the next thirty calendar days as expressed by options on NDX. The Exchange explains that the Volatility Index uses the bid and offer prices of certain listed options on NDX [14] to obtain the prices of synthetic precisely at-the-money (''ATM'') options, which are then used to calculate 30-day closed-form implied volatility. Finally, the 30-day closed-form implied volatility is multiplied by 100 to calculate the Volatility Index level. The Volatility Index is quoted in annualized percentage points. For example, an Index level of 17.90 represents an annualized implied volatility of 17.90%.

The Exchange believes that the proposed product does not have single or aggregated component concentration risk. The Exchange states that the methodology caps each single component as well as the top five weighted components. The Exchange further states that no component security of the Volatility Index comprises more than 12.50% of the index's weighting and that the five weighted component securities of the Volatility Index in the aggregate do not comprise more than 43.75% of the index's weighting.

Index Calculation and Maintenance

The Exchange states that the level of the Volatility Index will reflect the current 30-day implied volatility of NDX. The Volatility Index will be updated on a real-time basis on each trading day beginning at 9:30 a.m. and ending at 4:15 p.m. (New York time). If the current published value of a component is not available, the last published value will be used in the calculation. Values of the Volatility Index will be disseminated via the Nasdaq GIDS market data system every fifteen seconds during the Exchange's regular trading hours to market information vendors such as Bloomberg and Thomson Reuters. In the event the Volatility Index ceases to be maintained or calculated the Exchange will not list any additional series for trading and will limit all transactions in such options to closing transactions only for the purpose of maintaining a fair and orderly market and protecting investors.

Exercise and Settlement Value

The exercise settlement value calculation used for Volatility Index option settlement will be calculated on the same day as the Volatility Index Options expiration date. The exercise settlement value of a Volatility Index option will be calculated on the specific date (usually a Wednesday) identified in the option symbol for the series. If that Wednesday or the Friday that is thirty days following that Wednesday is an Exchange holiday, the exercise settlement value will be calculated on the business day immediately preceding that Wednesday. The last trading day for a Volatility Index option will be the business day immediately preceding the expiration date of the Volatility Index option. When the last trading day is moved because of an Exchange holiday, the last trading day for an expiring Volatility Index option contract will be the day immediately preceding the last regularly scheduled business day.[15]

Monthly options on the Volatility Index will expire on the Wednesday that is thirty days prior to the third Friday of the calendar month immediately following the expiring month. Trading in expiring options on the Volatility Index will normally cease at 4:15 p.m. (New York time) on the Tuesday preceding an expiration Wednesday.

Final Settlement [16]

The Exchange states that the final settlement price (Ticker Symbol: VOLS) will be calculated as described below on Wednesday commencing at 9:32:000 a.m. (New York time) on the expiration day, and continuing each second for the next 300 seconds (''Closing Settlement Period''). The exercise settlement amount will be equal to the difference between the final settlement price and the exercise price of the option, multiplied by $100. Exercise will result in the delivery of cash on the business day following expiration.

The Volatility Index's component NDX options are listed on Phlx as well as on the Exchange's affiliates, Nasdaq ISE, LLC (''ISE'') and Nasdaq GEMX, LLC (''GEMX''). The settlement value for the Volatility Index options (VOLS) will be the Closing Volume Weighted Average Price (''Closing VWAP''), to be determined by reference to the prices and sizes of executed transactions or

[7] The Exchange proposes to amend Phlx Options 4A, Section 12, ''Terms of Option Contracts,'' at subparagraphs (b)(2), (b)(6) and (e) as well as Supplementary Material .01 to Options 4A, Section 12. The Exchange also proposes to amend Phlx Options 3. Section 3, ''Minimum Increments'' and Options 4A, Section 6, ''Position Limits.''

[8] *See* Phlx Options 4A, Section 12, Terms of Option Contracts, proposed new section (b)(viii)(A).

[9] Phlx Options 4A, Section 12(b)(2), as proposed to be amended. Phlx Rule Options 4A, Section 12(b)(2) currently applies only to stock index options and would be amended to permit listing of long term Volatility Index options.

[10] For the Exchange's complete description of the proposal, including more information about the Volatility Index calculation methodology, *see* Notice, *supra* note 3.

[11] The calculation of the Volatility Index is based on the methodology developed by NShares LLC.

[12] The Exchange reports that as of June 30, 2020, there were 78 components in the bottom 25% of Nasdaq-100 Index weight. From January 1 through June 30, 2020, these components had an Average Daily Dollar Trading Volume of $29.7 billion. The Average Daily Dollar Trading Volume of the least active component was $41.1 million. The aggregate market capitalization of the 78 components was $2.60 trillion. The Exchange states that the Nasdaq-100 Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade, and biotechnology. It does not contain securities of financial companies including investment companies.

[13] Phlx Options 4A, Section 2(a)(13) define a ''market index'' and ''broad-based index'' to mean an index designed to be representative of a stock market as a whole or of a range of companies in unrelated industries. The Exchange states that, like the Cboe Volatility Index (''VIX''), VOLQ is an implied volatility index and not a realized volatility index.

[14] For any calculation of synthetic precisely ATM option prices, a total of thirty-two component options are used, comprising four calls and four puts from each of four consecutive weeks.

[15] *See* Phlx Options 4A, Section 12, ''Terms of Option Contracts,'' proposed new section (b)(6)(B) and (C).

[16] For a full description of the final settlement process, *see* Notice *supra* note 3.

quotes in the thirty-two underlying NDX component options [17] on the Exchange calculated at the opening of trading on the expiration date. As part of the Exchange's calculation of the Closing VWAP, the Exchange will observe the number of contracts of the then-current NDX component options traded on Phlx at each price during individual one-second intervals of the Closing Settlement Period on the expiration day.[18] If no transactions occur on Phlx in a NDX component option during any one-second observation period, the NBBO midpoint of each of the NDX component options for which a transaction has not occurred [19] at the end of the one second observation period will be considered the One Second VWAP for that observation period for purposes of the settlement methodology. The NBBO midpoint will be the midpoint of the best bid and best offer from Phlx, ISE, and GEMX.[20] Each One Second VWAP for each component option is then used to calculate the Volatility Index, resulting in the calculation of 300 sequential Volatility Index values. Finally, all 300 Volatility Index values will be arithmetically averaged (*i.e.,* the sum of 300 Volatility Index calculations is divided by 300) and the resulting figure is rounded to the nearest .01 to arrive at the settlement value.

The Exchange believes that the Volatility Index final settlement has exceedingly high hurdles for potential manipulation. First, the Exchange believes that market participants cannot predict which components will be included in the final settlement. Second, the Exchange believes that traders are subject to highly competitive market forces of deep and established market liquidity. For example, the Exchange notes that during each second of the final settlement observation period on January 16, 2019 and February 13, 2019, the average notional value of each bid of the thirty-two components was $21.1 million; the average notional value of each offer was $13.5 million. Third, the Exchange states that since the Volatility Index assesses each second of all listed NDX options, this is a continuous assessment of competitive price action and voluminous trading activity for all Nasdaq-100 Index stock components. In support, the Exchange notes that during the final settlement observation period (five-minute period) on January 16, 2019 and February 13, 2019, the average summation of traded volume for all Nasdaq-100 Index component shares was 18.8 million shares. The average total value of all Nasdaq-100 Index shares traded during the final settlement observation period was $1.93 billion. The corresponding market capitalization for all Nasdaq-100 Index components during the final settlement period was $7.8 trillion.

Contract Specifications

The proposed Options on the Volatility Index are European-style and cash-settled. The Exchange's standard trading hours for broad-based index options (9:30 a.m. to 4:15 p.m., New York time) will apply to the Volatility Index options under Phlx Options 4A, Section 12 at Supplementary Material .01, as proposed to be amended. The Exchange proposes to apply margin requirements for the purchase and sale of options on the Volatility Index that are identical to those applied for its other broad-based index options.

The trading of options on the Volatility Index will be subject to the trading halt procedures applicable to other index options traded on the Exchange.[21] Options on the Index will be quoted and traded in U.S. dollars.[22] Accordingly, the Exchange believes that all Exchange and The Options Clearing Corporation members will be able to accommodate trading, clearance and settlement of the Volatility Index without alteration. All options on the index will have a minimum increment of $0.05 for options trading below $3.00 and $0.10 for all other series.

The Exchange proposes to set the minimum strike price interval for options on the Volatility Index at $0.50 or greater where the strike price is less than $75, $1 or greater where the strike price is $200 or less and $5 or greater where the strike price is more than $200.[23] The Exchange proposes that there shall be no position or exercise limits for options on the Volatility Index.

The trading of options on the Volatility Index will be subject to the same rules that presently govern the trading of Exchange index options, including sales practice rules, margin requirements, and trading rules.[24]

The Exchange represents that it has an adequate surveillance program in place for options traded on the Volatility Index and intends to apply those same program procedures that it applies to the Exchange's other options products. Additionally, the Exchange states that it is a member of the Intermarket Surveillance Group, through which it can coordinate surveillance and investigative information sharing in the stock and options markets with all of the U.S. registered stock and options markets. The Exchange believes that it is unlikely that the Volatility Index settlement value could be manipulated because the likelihood of gaming the components over a 300 second period is extremely low. Phlx believes that its surveillance procedures currently in place, coupled with additional measures,[25] will allow it to adequately

[17] The Exchange states that, dependent upon movement in the Nasdaq-100 Index, the thirty-two underlying NDX component options can change every second.

[18] The Exchange calculates a volume weighted average price for each one-second observation period (a ''One Second VWAP'') for each component option.

[19] The Volatility Index's component NDX options are listed on Phlx as well as on the Exchange's affiliates, ISE and GEMX. The Exchange reports that NDX average bid/ask spreads for all component options at each second for each of four expiration dates (11/21/2018, 12/19/2018, 1/16/2019, and 2/13/2019) commencing at 9:30:15 a.m. is 5.52%. Commencing at 9:32.010 a.m. the NDX average bid/ask spreads for all component options at each second for each of four expiration dates is 3.72%. The Exchange believes that this demonstrates quote stability at 2 minutes after the opening.

[20] By considering the NBBO of all three markets, the Exchange believes the risk of manipulation is tempered by the consideration of a larger number of quotes from multiple Market Makers.

[21] Phlx Options 4A, Section 18(c), ''Trading Rotations, Halts or Reopenings.''

[22] Phlx Options 4A, Section 12(a)(1) titled ''Meaning of Premium Bids and Offers,'' provides that bids and offers shall be expressed in terms of dollars and decimal equivalents of dollars per unit of the index (*e.g.,* a bid of 85.50 would represent a bid of $85.50 per unit).

[23] Phlx Options 4A, Section 12 ''Terms of Option Contracts,'' proposed new section (b)(6)(E).

[24] The Exchange states that Phlx Options 10, Section 6, which is designed to protect public customer trading, will apply to trading in options on the Volatility Index. Specifically, the rule prohibits members and member organizations from accepting a customer order to purchase or write an option, including options on the Volatility Index, unless such customer's account has been approved in writing by an Options Principal. Additionally, Phlx Options 10, Section 8, ''Suitability,'' is designed to ensure that options, including options on the Volatility Index, are only sold to customers capable of evaluating and bearing the risks associated with trading in this instrument. Further, Phlx Options 10, Section 9, ''Discretionary Accounts,'' permits members and member organizations to exercise discretionary power with respect to trading options, including options on the Volatility Index, in a customer's account only if the customer has given prior written authorization and the account has been accepted in writing by a Registered Options Principal. Phlx Options 10, Section 9 also requires a record to be made of every option transaction for an account in respect to which a member or member organization or a partner, officer or employee of a member organization is vested with any discretionary authority, such record to include the name of the customer, the designation, number of contracts and premium of the option contracts, the date and time when such transaction took place and clearly reflecting the fact that discretionary authority was exercised. Finally, Phlx Options 10, Section 7, ''Supervision of Accounts,'' Phlx Options 10, Section 10,''Confirmations to Customers,'' and Phlx Options 10, Section 13, ''Delivery of Options Disclosure Documents,'' will also apply to trading in options on the Volatility Index.

[25] *See* Notice, *supra* note 3.

surveil for any potential manipulation in the trading of Volatility Index options. The Exchange also represents that it has the necessary system capacity to support additional quotations and messages that will result from the listing and trading of options on the Volatility Index.

B. Comment on the Proposal

A commenter, who states it is the provider of the VOLQ methodology, expressed support for the proposal. The commenter states that VOLQ is a response to requests from market participants and that competition and innovation generated by VOLQ are in the public interest and will benefit investors.[26]

III. Proceedings To Determine Whether To Approve or Disapprove SR-Phlx-2020–41 and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Sections 19(b)(2)(B) of the Act [27] to determine whether the proposed rule change should be approved or disapproved. Institution of proceedings is appropriate at this time in view of the legal and policy issues raised by the proposed rule change. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, as described below, the Commission seeks and encourages interested persons to provide additional comment on the proposed rule change to inform the Commission's analysis of whether to approve or disapprove the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Act,[28] the Commission is providing notice of the grounds for possible disapproval under consideration. The Commission is instituting proceedings to allow for additional analysis of and input concerning the proposed rule change's consistency with the Section 6(b)(5) of the Act, which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, 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.[29]

IV. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their views, data, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal. In particular, the Commission invites the written views of interested persons concerning whether the proposal is consistent with Section 6(b)(5) [30] of the Act or any other provision of the Act, or the rules and regulations thereunder. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of views, data, and arguments, the Commission will consider, pursuant to Rule 19b–4 under the Act,[31] any request for an opportunity to make an oral presentation.[32]

Interested persons are invited to submit written data, views, and arguments regarding whether the proposed rule change should be approved or disapproved by December 31, 2020. Any person who wishes to file a rebuttal to any other person's submission must file that rebuttal by January 14, 2021. The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal, which are set forth in the Notice,[33] in addition to any other comments they may wish to submit about the proposed rule change. In this regard, the Commission seeks commenters' views regarding whether the Exchange's proposal to list and trade options on the Volatility Index, a new index that measures changes in 30-day implied volatility of the Nasdaq-100 Index, is adequately designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and to protect investors and the public interest.

Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File No. SR-Phlx–2020–41 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 No. SR-Phlx–2020–41. The 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 (*http://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 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make publicly available. All submissions should refer to File No. SR-Phlx–2020–41 and should be submitted on or before December 31, 2020. Rebuttal comments should be submitted by January 14, 2021.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[34]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2020–27090 Filed 12–9–20; 8:45 am]

BILLING CODE 8011–01–P

[26] *See* letter dated September 16, 2020 from Scott Nations, President, Nations Indexes, to Vanessa Countryman, Secretary, Commission, available at: *https://www.sec.gov/comments/sr-phlx-2020-41/srphlx202041-7783670-223493.pdf.*

[27] 15 U.S.C. 78s(b)(2)(B).

[28] *Id.*

[29] 15 U.S.C. 78f(b)(5).

[30] 15 U.S.C. 78f(b)(5).

[31] 17 CFR 240.19b–4.

[32] Section 19(b)(2) of the Act, as amended by the Securities Act Amendments of 1975, Pub. L. 94–29 (June 4, 1975), grants the Commission flexibility to determine what type of proceeding—either oral or notice and opportunity for written comments—is appropriate for consideration of a particular proposal by a self-regulatory organization. *See* Securities Act Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).

[33] *See* Notice, *supra* note 3.

[34] 17 CFR 200.30–3(a)(57).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–90571; File No. SR–NASDAQ–2020–082]

Self-Regulatory Organizations; The Nasdaq Stock Market LLC; Notice of Filing of Proposed Rule Change To Adopt Listing Rule IM–5900–9 To Offer Certain Listed Companies Access to a Complimentary Board Recruiting Solution To Help Advance Diversity on Company Boards

December 4, 2020.

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 December 1, 2020, The Nasdaq Stock Market LLC (''Nasdaq'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II 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

The Exchange proposes to adopt Listing Rule IM–5900–9 to offer certain listed companies access to a complimentary board recruiting solution to help advance diversity on company boards.

The text of the proposed rule change is detailed below: proposed new language is italicized and proposed deletions are in brackets.

* * * * *

IM–5900–9. Board Diversity Services

On December 1, 2020, Nasdaq filed a proposal (SR–Nasdaq–2020–081) to require each listed Company, subject to certain exceptions, to have, or explain why it does not have, at least two diverse directors on its board (the ''Diversity Rule''). In order to help advance diversity on Company boards and to help Companies prepare for and, if approved, comply with the Diversity Rule, Nasdaq offers Eligible Companies complimentary access to two seats of a board recruiting solution, which will allow Companies to identify and evaluate diverse board candidates. Until December 1, 2022, any Eligible Company that requests access to this service through the Nasdaq Listing Center will receive complimentary access for one-year from the initiation of the service. This service has a retail value of approximately $10,000 per year.

An Eligible Company is:

(a) Any listed Company, except as described below, that represents to Nasdaq that it does not have (i) at least one director who self-identifies as female; and (ii) at least one director who self-identifies as one or more of the following: Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or Two or More Races or Ethnicities, or who self-identifies as lesbian, gay, bisexual, transgender or as a member of the queer community;

(b) a listed Company that (i) is a Foreign Private Issuer (as defined in Rule 5005(a)(19), or (ii) is considered a foreign issuer under Rule 3b–4(b) under the Act and has its principal executive offices located outside of the United States, if it represents to Nasdaq that it does not have (i) at least one director who self-identifies as female; and (ii) at least one director who self-identifies as one or more of the following: female, an underrepresented individual based on national, racial, ethnic, indigenous, cultural, religious or linguistic identity in the company's home country jurisdiction, or lesbian, gay, bisexual, transgender or as a member of the queer community; or

(c) a listed Company that is a Smaller Reporting Company (as defined in Rule 12b-2 under the Act), if it represents to Nasdaq that it does not have (i) at least one director who self-identifies as female, and (ii) at least one director who self-identifies as one or more of the following: female, Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or Two or More Races or Ethnicities, or who self-identifies as lesbian, gay, bisexual, transgender or as a member of the queer community.

* * * * *

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

In a separate rule filing,[3] Nasdaq is proposing to require each of its listed companies, subject to certain exceptions, to: (i) Provide statistical information regarding diversity among the members of the company's board of directors; and (ii) to have, or explain why the company does not have, at least one director who self-identifies as a female, and at least one director who self-identifies as Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, two or more races or ethnicities, or as LGBTQ+.[4] Nasdaq is proposing herein to provide companies that would need to take action to satisfy that requirement, if approved, with a service to help them recruit diverse directors.

In researching the Diversity Proposal, Nasdaq reviewed dozens of empirical studies and found that an extensive body of academic research demonstrates that diverse boards are positively associated with improved corporate governance and financial performance.[5] In particular, studies have found that companies with gender-diverse boards or audit committees are associated with: more transparent public disclosures [6] and less information asymmetry; [7] better reporting discipline by management; [8] a lower likelihood of manipulated

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] SR-Nasdaq-2020–081(December 1, 2020) available at *https://listingcenter.nasdaq.com/assets/Board%20Diversity%20Disclosure%20Rule%20Filing.pdf* (the ''Nasdaq Diversity Proposal'').

[4] As defined in the proposed rule change, ''female'' means an individual who self-identifies her gender as a woman, without regard to the individual's designated sex at birth; and ''LGBTQ+'' means an individual who self-identifies as any of the following: lesbian, gay, bisexual, transgender or a member of the queer community.

[5] *See* Nasdaq Diversity Proposal at Section II, Academic Research: The Relationship between Diversity and Shareholder Value, Investor Protection and Decision Making.

[6] *See* Ferdinand A. Gul et al., *Does board gender diversity improve the informativeness of stock prices?,* 51(3) J. Acct. & Econ. 314 (April 2011) (analyzing 4,084 firm years during the period from 2002 to 2007, excluding companies in the utilities and financial industries, measuring public information disclosure using ''voluntary continuous disclosure of 'other' events in 8K reports'' and measuring stock price informativeness by ''idiosyncratic volatility,'' or volatility that cannot be explained to systematic factors and can be diversified away).

[7] *See* David Abad et al., *Does Gender Diversity on Corporate Boards Reduce Information Asymmetry in Equity Markets?* 20(3) BRQ Business Research Quarterly 192 at 202 (July 2017) (analyzing 531 company-year observations from 2004 to 2009 of non-financial companies traded on the electronic trading platform of the Spanish Stock Exchange (SIBE)).

[8] *See* Bin Srinidhi et al., *Female Directors and Earnings Quality,* 28(5) Contemporary Accounting Research 1610 at 1612–16 (Winter 2011) (analyzing 3,132 firm years during the period from 2001 to 2007 based on S&P COMPUSTAT, Corporate Library's Board Analyst, and IRRC databases; ''choos[ing] the accruals quality as the metric that best reflects the ability of current earnings to reflect future cash flows'' (noting that it ''best predicts the incidence and magnitude of fraud relative to other commonly used measures of earnings quality'') and analyzing surprise earnings results that exceeded previous earnings or analyst forecasts, because ''managers of firms whose unmanaged earnings fall marginally below the benchmarks have [an] incentive to manage earnings upwards so as to meet or beat previous earnings'').

earnings through earnings management;[9] an increased likelihood of voluntarily disclosing forward-looking information;[10] a lower likelihood of receiving audit qualifications due to errors,[11] non-compliance or omission of information;[12] and a lower likelihood of securities fraud.[13] In addition, studies found that having at least one woman on the board is associated with a lower likelihood of material weaknesses in internal control over financial reporting,[14] and a lower likelihood of material financial restatements.[15] Studies also identified positive relationships between board diversity and commonly used financial metrics, including higher returns on invested capital, returns on equity, earnings per share, earnings before interest and taxation margin, asset valuation multiples and credit ratings.[16]

In addition, investors and investor groups are calling for diversification in the boardroom[17] and legislators at the federal and state level are increasingly taking action to encourage or mandate corporations to diversify their boards and improve diversity disclosures.[18]

Given the positive attributes associated with diverse boards and investor desire for greater diversity in the boardroom, Nasdaq wants to advance board diversity among its listed companies. Nasdaq believes that offering a board recruiting solution will assist and encourage listed companies to increase diverse representation on their boards, which can result in improved corporate governance, thus strengthening the integrity of the market and building investor confidence. Nasdaq also believes that offering this service will help aid compliance with the Nasdaq Diversity Proposal, if it is approved. Nasdaq therefore is proposing to provide companies that have not yet achieved a certain level of diversity with one-year complimentary access for two users to a board recruiting solution, which will provide access to a network of board-ready diverse candidates, allowing companies to identify and evaluate diverse board candidates, and a tool to support board benchmarking. This service has an approximate retail value of $10,000.

Nasdaq will offer this service to any Eligible Company, which is a listed company (except as described below)

[9] *See* Ammar Gull et al., *Beyond gender diversity: How specific attributes of female directors affect earnings management,* 50(3) British Acct. Rev. 255 (Sept. 2017), available at: *https://ideas.repec.org/a/eee/bracre/v50y2018i3p255-274.html* (analyzing 394 French companies belonging to the CAC All-Shares index listed on Euronext Paris from 2001 to 2010, prior to the implementation of France's gender mandate law that required women to comprise 20% of a company's board of directors by 2014 and 40% by 2016).

[10] *See* Francisco Bravo and Maria Dolores Alcaide-Ruiz, *The disclosure of financial forward-looking information,* 34(2) Gender in Mgmt. 140 at 142–44 (2019) (analyzing companies included in the S&P 100 Index in 2016, ''focus[ing] on the disclosure of financial forward-looking information (which is likely to require financial expertise), such as earnings forecasts, expected revenues, anticipated cash flows or any other financial indicator'').

[11] *See* Maria Consuelo Pucheta-Martínez et al., *Corporate governance, female directors and quality of financial information.* 25(4) Bus. Ethics: A European Rev. 363 at 368 (2016) (analyzing a sample of non-financial companies listed on the Madrid Stock Exchange during 2004–2011).

[12] *Id.* at 363.

[13] *See* Douglas J. Cumming et al., *Gender Diversity and Securities Fraud,* Academy of Management Journal 34 (forthcoming) (Feb. 2, 2015), available at *https://ssrn.com/abstract=2562399* (analyzing China Securities Regulatory Commission data from 2001 to 2010, including 742 companies with enforcement actions for fraud, and 742 non-fraudulent companies for a control group).

[14] *See* Yu Chen et al., *Board Gender Diversity and Internal Control Weaknesses,* 33 Advances in Acct. 11 (2016) (analyzing a sample of 4267 firm-year observations during the period from 2004 to 2013, beginning ''the first year internal control weaknesses were required to be disclosed under section 404 of SOX'').

[15] *See* Lawrence J. Abbott et al., *Female Board Presence and the Likelihood of Financial Restatement,* 26(4) Accounting Horizons 607, 626 (2012) (analyzing a sample of 278 pre-SOX annual financial restatements and 187 pre-SOX quarterly financial restatements of U.S. companies from January 1, 1997 through June 30, 2002 identified by the U.S. General Accounting Office restatement report 03–138 (which only included ''material misstatements of financial results''), and 75 post-SOX annual financial restatements from July 1, 2002, to September 30, 2005 identified by U.S. General Accounting Office restatement report 06–678 (which only included ''restatements that were being made to correct material misstatements of previously reported financial information''), consisting almost exclusively of non-Fortune 1000 companies); *See also* Aida Sijamic Wahid, The *Effects and the Mechanisms of Board Gender Diversity: Evidence from Financial Manipulation,* J. Bus. Ethics (forthcoming) (Dec. 2017) Rotman School of Management Working Paper No. 2930132 at 1, available at: *https://ssrn.com/abstract=2930132* (analyzing 6,132 U.S. public companies during the period from 2000 to 2010, for a total of 38,273 firm-year observations).

[16] *See, generally,* FCLTGlobal, *The Long-term Habits of a Highly Effective Corporate Board* 11 (March 2019), available at: *https://www.fcltglobal.org/wp-content/uploads/long-term-habits-of-highly-effective-corporate-boards.pdf* (analyzing 2017 MSCI ACWI constituents from 2010 to 2017 using Bloomberg data); Credit Suisse, *The CS Gender 3000: Women in Senior Management* 16 (Sept. 2014), available at: *https://www.credit-suisse.com/media/assets/corporate/docs/about-us/research/publications/the-cs-gender-3000-women-in-senior-management.pdf* (*analyzing 3,000 companies across 40 countries from the period from 2005 to 2013)*; Meggin Thwing Eastman et al., MSCI, *The tipping point: Women on boards and financial performance* 3 (December 2016), available at: *https://www.msci.com/documents/10199/fd1f8228-cc07-4789-acee-3f9ed97ee8bb* (analyzing of U.S. companies that were constituents of the MSCI World Index for the entire period from July 1, 2011 to June 30, 2016); Harvey M. Wagner, Catalyst, *The Bottom Line: Corporate Performance and Women's Representation on Boards (2004–2008)* (March 1, 2011), available at: *https://www.catalyst.org/research/the-bottom-line-corporate-performance-and-womens-representation-on-boards-2004-2008/* (analyzing gender diversity data from Catalyst's annual Fortune 500 Census of Women Board Directors report series for the years 2005 to 2009, and corresponding financial data from S&P's Compustat database for the years 2004 to 2008); Credit Suisse ESG Research, *LGBT: the value of diversity* 1 (April 15, 2016), available at: *https://research-doc.credit-suisse.com/docView?language=ENG&source=emfromsendlink&format=PDF&document_id=807075590&extdocid=807075590_1_eng_pdf&serialid=evu4wNcHexx7kusNLaZQphUkT9naxi1PvptZQvPjr1k%3d;* McKinsey & Company, *Diversity wins: How inclusion matters* 13 (May 2020), available at: *https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Diversity%20and%20Inclusion/Diversity%20wins%20How%20inclusion%20matters/Diversity-wins-How-inclusion-matters-vF.pdf* (analyzing 1,039 companies across 15 countries for the period from December 2018 to November 2019); and Moody's Investors Service, *Gender diversity is correlated with higher ratings, but mandates pose short-term risk* 2 (Sept. 11, 2019), available at: *https://www.moodys.com/research/Moodys-Corporate-board-gender-diversity-associated-with-higher-credit-ratings-PBC_1193768* (analyzing 1,109 publicly traded North American companies rated by Moody's).

[17] Vanguard announced in 2020 it would begin asking companies about the race and ethnicity of directors. *See* Vanguard, *Investment Stewardship 2020 Annual Report* (2020), available at: *https://about.vanguard.com/investment-stewardship/perspectives-and-commentary/2020_investment_stewardship_annual_report.pdf.* Starting in 2020, State Street Global Advisors will vote against the entire nominating committee of companies that do not have at least one woman on their boards and have not addressed questions on gender diversity within the last three years. *See* State Street Global Advisors, *Summary of Material Changes to State Street Global Advisors' 2020 Proxy Voting and Engagement Guidelines* (2020), available at: *https://www.ssga.com/library-content/pdfs/global/proxy-voting-and-engagement-guidelines.pdf.* Beginning in 2018, BlackRock stated in proxy voting guidelines they ''would normally expect to see at least 2 women directors on every board.'' *See* BlackRock Investment Stewardship, *Corporate governance and proxy voting guidelines for U.S. securities* (Jan. 2020), available at: *https://www.blackrock.com/corporate/literature/fact-sheet/blk-responsible-investment-guidelines-us.pdf.* The NYC Comptroller's Office in 2019 asked companies to adopt policies to ensure women and people of color are on the initial list for every open board seat. *See* Scott M. Stringer, *Remarks at the Bureau of Asset Management 'Emerging Managers and MWBE Managers Conference* (Oct. 11, 2019), available at: *https://comptroller.nyc.gov/wp-content/uploads/2019/10/10.11.19-SMS-BAM-remarks_distro.pdf.*

[18] For example, California requires companies headquartered in the state to have at least one director who self-identifies as a Female and one from an Underrepresented Community. *See* Cal. S.B. 826 (Sept. 30, 2018); Cal. A.B. 979 (Sept. 30, 2020). Washington requires companies headquartered in the state to have at least 25% women on the board by 2022 or provide certain disclosures. *See* Wash. Subst. S.B. 6037 (June 11, 2020). At least eleven states have proposed diversity-related requirements. *See* Michael Hatcher and Weldon Latham, *States are Leading the Charge to Corporate Boards: Diversify!,* Harv. L. Sch. Forum on Corp. Governance (May 12, 2020), available at: *https://corpgov.law.harvard.edu/2020/05/12/states-are-leading-the-charge-to-corporate-boards-diversify/.*

that represents to Nasdaq that it does not have: (i) At least one director who self-identifies as female; and (ii) at least one director who self-identifies as one or more of the following: Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or Two or More Races or Ethnicities or who self-identifies as lesbian, gay, bisexual, transgender or as a member of the queer community. A company that is a Foreign Private Issuer (as defined in Rule 5005(a)(19)) or, (i) is considered a foreign issuer under Rule 3b–4(b) under the Act and (ii) has its principal executive offices located outside of the United States, will be an Eligible Company if the company represents to Nasdaq that it does not have: (i) At least one director who self-identifies as female; and (ii) at least one director who self-identifies as one or more of the following: Female, an underrepresented individual based on national, racial, ethnic, indigenous, cultural, religious or linguistic identity in the company's home country jurisdiction, or lesbian, gay, bisexual, transgender or as a member of the queer community. A company that is a Smaller Reporting Company (as defined in Rule 12b–2 under the Act), will be an Eligible Company if the company represents to Nasdaq that it does not have: (i) At least one director who self-identifies as female, and (ii) at least one director who self-identifies as one or more of the following: female, Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or Two or More Races or Ethnicities, or who self-identifies as lesbian, gay, bisexual, transgender or as a member of the queer community.[19]

Nasdaq will offer this one-year service to Eligible Companies that request it on or before December 1, 2022. Nasdaq intends to evaluate the service and the progress made in enhancing diversity and may extend the program prior to its expiration through another rule filing.

Nasdaq notes that no other company will be required to pay higher fees as a result of this proposal and represents that providing this service will have no impact on the resources available for its regulatory programs.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Exchange Act,[20] in general, and furthers the objectives of Section 6(b)(5) of the Exchange Act,[21] in particular, in that it 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. It is also consistent with this provision because it is not designed to permit unfair discrimination between issuers. Nasdaq also believes that the proposed rule change is consistent with the provisions of Sections 6(b)(4)[22] and 6(b)(8),[23] in that the proposal is designed, among other things, to provide for the equitable allocation of reasonable dues, fees, and other charges among Exchange members and issuers and other persons using its facilities and that the rules of the Exchange do not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act.

Nasdaq believes that research surrounding the value of diversity on a company's board and investor interest in more diverse boards supports the fact that the proposal to offer access to a board recruiting solution promotes just and equitable principles of trade and protects investors and the public interest. Nasdaq believes that by making this service available more companies will seek to enhance the diversity of their boards to achieve these benefits. However, no company is required to use this service.

Nasdaq also believes it is reasonable, and not unfairly discriminatory, to offer the board recruiting solution only to Eligible Companies because these companies have the greatest need to identify diverse board candidates. In addition, if the Nasdaq Diversity Proposal is approved, these companies will need to identify diverse board candidates if they wish to satisfy that requirement instead of explaining why they do not satisfy it. Further, Nasdaq believes that companies that already have two diverse directors will already be familiar with the benefits of board diversity and have demonstrated that they do not need Nasdaq's assistance in identifying diverse candidates.

Nasdaq faces competition in the market for listing services,[24] and competes, in part, by offering valuable services to companies. Nasdaq believes that it is reasonable to offer this complimentary service as a tool to attract and retain listings as part of this competition. In particular, Nasdaq believes some companies will view the proposed board recruiting solution as a valuable tool to help achieve diversity, to the potential benefit of the company and its investors. Nasdaq also believes that offering this complimentary service will help it compete to attract and retain listings in light of the additional requirements contained in the Nasdaq Diversity Proposal.

For these reasons, Nasdaq believes it is not an inequitable allocation of fees, unfairly discriminatory, nor an unnecessary or inappropriate burden on competition to offer the board recruiting solution only to Eligible Companies.

The Commission has previously indicated pursuant to Section 19(b) of the Exchange Act[25] that providing and updating the value of services offered to certain listed companies within the rulebook is necessary,[26] and Nasdaq does not believe this indication of value has an effect on the allocation of fees nor does it permit unfair discrimination, as all companies with fewer than two diverse directors will receive the same services. Further, this provision will enhance the transparency of Nasdaq's rules and the value of the services it offers, thus promoting just and equitable principles of trade. As such, the proposed rule change is consistent with the requirements of Section 6(b)(4) and (5) of the Exchange Act.

Nasdaq represents, and this proposed rule change will help ensure, that individual listed companies are not given specially negotiated packages of products or services to list, or remain listed, which the Commission has previously stated would raise unfair discrimination issues under the Exchange Act.[27]

[19] A company that is not an Eligible Company is able to receive a complimentary 90-day trial of the board recruiting solution, which is being offered by Nasdaq's partner to all clients of Nasdaq, Inc., including non-listed companies.

[20] 15 U.S.C. 78f(b).

[21] 15 U.S.C. 78f(b)(5).

[22] 15 U.S.C. 78f(4).

[23] 15 U.S.C. 78f(8).

[24] The Justice Department has noted the intense competitive environment for exchange listings. *See* ''NASDAQ OMX Group Inc. and Intercontinental Exchange Inc. Abandon Their Proposed Acquisition Of NYSE Euronext After Justice Department Threatens Lawsuit'' (May 16, 2011), available at *http://www.justice.gov/atr/public/press_releases/2011/271214.htm*.

[25] 15 U.S.C. 78s(b).

[26] *See* Exchange Act Release No. 72669 (July 24, 2014), 79 FR 44234 (July 30, 2014) (SR–NASDAQ–2014–058) (footnote 39 and accompanying text: ''We would expect Nasdaq, consistent with Section 19(b) of the Exchange Act, to periodically update the retail values of services offered should they change. This will help to provide transparency to listed companies on the value of the free services they receive and the actual costs associated with listing on Nasdaq.'')

[27] *See* Exchange Act Release No. 79366, 81 FR 85663 at 85665 (citing Securities Exchange Act Release No. 65127 (August 12, 2011), 76 FR 51449, 51452 (August 18, 2011) (approving NYSE–2011–20)).

B. Self-Regulatory Organization's Statement on Burden on Competition

Nasdaq 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, as amended. As noted above, Nasdaq faces competition in the market for listing services, and competes, in part, by offering valuable services to companies. The proposed rule change reflects that competition, but does not impose any burden on the competition with other exchanges. Rather, Nasdaq believes that some companies will find the proposed board recruiting solution an attractive offering and therefore make listing or remaining listed on Nasdaq more attractive, which will enhance competition for listings.

Other exchanges can also offer similar services to companies, thereby increasing competition to the benefit of those companies and their shareholders. Accordingly, Nasdaq does not believe the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act, as amended.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

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 self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the 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 (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–NASDAQ–2020–082 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–NASDAQ–2020–082. 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 (*http://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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NASDAQ–2020–082, and should be submitted on or before December 31, 2020.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[28]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2020–27089 Filed 12–9–20; 8:45 am]

BILLING CODE 8011–01–P

[28] 17 CFR 200.30–3(a)(12).

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

[Docket No. FRA–2020–0027–N–35]

Proposed Agency Information Collection Activities; Comment Request

AGENCY: Federal Railroad Administration (FRA), U.S. Department of Transportation (DOT).

ACTION: Notice of information collection; request for comment.

SUMMARY: Under the Paperwork Reduction Act of 1995 (PRA) and its implementing regulations, FRA seeks approval of the Information Collection Request (ICR) abstracted below. Before submitting this ICR to the Office of Management and Budget (OMB) for approval, FRA is soliciting public comment on specific aspects of the activities identified below.

DATES: Interested persons are invited to submit comments on or before February 8, 2021.

ADDRESSES: Submit written comments and recommendations for the proposed ICR to Ms. Kim Toone, Information Collection Clearance Officer, Office of Information Technology, at *Kim.Toone@dot.gov*. Please refer to the assigned OMB control number in any correspondence submitted. FRA will summarize comments received in response to this notice in a subsequent notice and include them in its information collection submission to OMB for approval.

SUPPLEMENTARY INFORMATION: The PRA, 44 U.S.C. 3501–3520, and its implementing regulations, 5 CFR part 1320, require Federal agencies to provide 60-days' notice to the public to allow comment on information collection activities before seeking OMB approval of the activities. *See* 44 U.S.C. 3506, 3507; 5 CFR 1320.8 through 1320.12. Specifically, FRA invites interested parties to comment on the following ICR regarding: (1) Whether the information collection activities are necessary for FRA to properly execute its functions, including whether the activities will have practical utility; (2) the accuracy of FRA's estimates of the burden of the information collection activities, including the validity of the methodology and assumptions used to determine the estimates; (3) ways for FRA to enhance the quality, utility, and clarity of the information being collected; and (4) ways for FRA to minimize the burden of information collection activities on the public, including the use of automated

collection techniques or other forms of information technology. *See* 44 U.S.C. 3506(c)(2)(A); 5 CFR 1320.8(d)(1).

FRA believes that soliciting public comment may reduce the administrative and paperwork burdens associated with the collection of information that Federal regulations mandate. In summary, FRA reasons that comments received will advance three objectives: (1) Reduce reporting burdens; (2) organize information collection requirements in a ''user-friendly'' format to improve the use of such information; and (3) accurately assess the resources expended to retrieve and produce information requested. *See* 44 U.S.C. 3501.

The summary below describes the ICR that FRA will submit for OMB clearance as the PRA requires:

Title: Metrics and Minimum Standards for Intercity Passenger Rail Service.

OMB Control Number: 2130–0623.

Abstract: On October 16, 2008, President George W. Bush signed the Passenger Rail Investment and Improvement Act of 2008, Public Law 110–432, 122 Stat. 4907 (PRIIA) into law. Section 207 of PRIIA requires FRA and Amtrak jointly to develop new or improved metrics and minimum standards for measuring the performance and service quality of intercity passenger train operations, including cost recovery, on-time performance and minutes of delay, ridership, on-board services, stations, facilities, equipment, and other services.

Section 207 also calls for consultation with the Surface Transportation Board, rail carriers over whose rail lines Amtrak trains operate, States, Amtrak employees, and groups representing Amtrak passengers, as appropriate.

Section 207 further provides that the metrics, at a minimum, must include: The percentage of avoidable and fully allocated operating costs covered by passenger revenues on each route; ridership per train mile operated; measures of on-time performance and delays incurred by intercity passenger trains on the rail lines of each rail carrier; and, for long-distance routes, measures of connectivity with other routes in all regions currently receiving Amtrak service and the transportation needs of communities and populations that are not well-served by other forms of intercity transportation.

Section 207 also provides that the FRA Administrator must collect the necessary data and publish a quarterly report on the performance and service quality of intercity passenger train operations, including Amtrak's cost recovery, ridership, on-time performance and minutes of delay, causes of delay, on-board services, stations, facilities, equipment, and other services.

In connection with the Congressional mandate, FRA's Metrics and Minimum Standards for Intercity Passenger Rail Service final rule sets forth a number of metrics that must be collected. 85 FR 72971. On November 23, 2020, FRA published a request for emergency processing of a collection of information because FRA could not reasonably comply with normal clearance procedures to timely collect ridership data metrics and certified schedule metrics as required by § 273.5(b) and § 273.5(c). 85 FR 74783. This ICR request covers all metrics set forth in the final rule, including those covered by the emergency clearance.

Type of Request: Revision to a currently approved information collection.

Affected Public: Amtrak.

Form(s): N/A.

Respondent Universe: [1] 1 (Amtrak).

Frequency of Submission: Varied.

Reporting Burden: [2]

CFR section	Respondent universe	Total annual responses	Average time per responses	Total annual burden hours	Total annual burden hours notes	Total cost equivalent [3]
273.5(a)—Customer on-time performance.	1 railroad	4	1	4		$310
273.5(b)—Ridership data	1 railroad	12	1	22	(One-time 10 hour start-up burden + average response time).	1,704
273.5(c)—Certified schedule.	1 railroad	7	1	27	(One-time 20 hour start-up burden + average response time in the first year; after first year it is one annual response with an average time per response of 1 hour).	2,092
273.5(c)(2)—Monthly letter to U.S. Congress and other officials.	24 railroads	30	10	300	(Estimated to only be incurred in the first year)	50,328
273.5(d)—Train delays	1 railroad	4	1	4		310
273.5(e)—Train delays per 10,000 train miles.	1 railroad	4	1	4		310
273.5(f)—Station performance.	1 railroad	4	1	24	(One-time 20 hour start-up burden + average response time).	1,859
273.5(f)—Host running time.	1 railroad	4	1	44	(One-time 40 hour start-up burden + average response time).	3,409
273.7(a)—Customer satisfaction.	1 railroad	4	1	4		310
273.7(b)—Amtrak personnel.	1 railroad	4	1	4		310
273.7(c)—Information given.	1 railroad	4	1	4		310
273.7(d)—On-board comfort.	1 railroad	4	1	4		310
273.7(e)—On-board cleanliness.	1 railroad	4	1	4		310
273.7(f)—On-board food service.	1 railroad	4	1	4		310
273.9(a)—Cost recovery	1 railroad	4	1	4		310
273.9(b)—Avoidable operating costs covered by passenger revenue.	1 railroad	4	1	4		310

[1] As noted in the table, the respondent universe for the required reporting in 49 CFR 273.5(c)(2) is 24 railroads.

[2] This table reflects the estimates for the first year which include one-time start up burdens. The annual response, burden and total cost equivalent estimates are expected to decrease after the first year of this 3-year ICR period.

CFR section	Respondent universe	Total annual responses	Average time per responses	Total annual burden hours	Total annual burden hours notes	Total cost equivalent [3]
273.9(c)—Fully allocated core operating costs covered by passenger revenue.	1 railroad	4	1	4		310
273.9(d)—Average ridership.	1 railroad	4	1	4		310
273.9(e)—Total ridership	1 railroad	4	1	4		310
273.11(a)—Connectivity	1 railroad	1	1	1		77
273.11(b)—Missed connections.	1 railroad	1	1	11	(One-time 10 hour start-up burden + average response time).	852
273.11(c)—Community access.	1 railroad	1	1	11	(One-time 10 hour start-up burden + average response time).	852
273.11(d)—Service availability.	1 railroad	1	1	11	(One-time 10 hour start-up burden + average response time).	852
Total		117	15	507		66,365.00

Total Estimated Annual Responses: 117.

Total Estimated Annual Burden: 507 hours.

Total Estimated Annual Burden Hour Dollar Cost Equivalent: $66,365.

Under 44 U.S.C. 3507(a) and 5 CFR 1320.5(b) and 1320.8(b)(3)(vi), FRA informs all interested parties that a respondent is not required to respond to, conduct, or sponsor a collection of information that does not display a currently valid OMB control number.

Authority: 44 U.S.C. 3501–3520.

Brett A. Jortland,

Deputy Chief Counsel.

[FR Doc. 2020–27155 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2020–0059; Notice 1]

Notice of Receipt of Petition for Decision That Nonconforming Model Year 2012–2014 Mercedes Benz G500 and G500 Cabriolet Multi-Purpose Vehicles Are Eligible for Importation

AGENCY: National Highway Traffic Safety Administration, Department of Transportation (DOT).

ACTION: Receipt of petition.

SUMMARY: This document announces the National Highway Traffic Safety Administration (NHTSA) receipt of a petition for a decision that model year (MY) 2012–2014 Mercedes Benz G500 and G500 Cabriolet Multi-Purpose Vehicles (MPVs) that were not originally manufactured to comply with all applicable Federal motor vehicle safety standards (FMVSS), are eligible for importation into the United States because they are substantially similar to vehicles that were originally manufactured for sale in the United States and that were certified by their manufacturer as complying with the safety standards (the U.S.-certified version of the 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs) and are capable of being readily altered to conform to the standards.

DATES: The closing date for comments on the petition is January 11, 2021.

ADDRESSES: Interested persons are invited to submit written data, views, and arguments on this petition. Comments must refer to the docket and notice number cited in the title of this notice and may be submitted by any of the following methods:

- *Mail:* Send comments by mail addressed to the 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 comments by hand to the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590. The Docket Section is open on weekdays from 10 a.m. to 5 p.m. except for Federal Holidays.
- *Electronically:* Submit comments electronically by logging onto the Federal Docket Management System (FDMS) website at *https://www.regulations.gov/.* Follow the online instructions for submitting comments.
- Comments may also be faxed to (202) 493–2251.

Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that comments you have submitted by mail were received, please enclose a stamped, self-addressed postcard along with the comments. Note that all comments received will be posted without change to *https://www.regulations.gov,* including any personal information provided.

All comments and supporting materials received before the close of business on the closing date indicated above will be filed in the docket and will be considered. All comments and supporting materials received after the closing date will also be filed and will be considered to the fullest extent possible.

All comments, background documentation, and supporting materials submitted to the docket may be viewed by anyone at the address and times given above. The documents may also be viewed on the internet at *https://www.regulations.gov* by following the online instructions for accessing the dockets. The docket ID number for this petition is shown in the heading of this notice.

DOT's complete Privacy Act Statement is available for review in a **Federal Register** notice published on April 11, 2000, (65 FR 19477–78).

FOR FURTHER INFORMATION CONTACT: Robert Mazurowski, Office of Vehicle Safety Compliance, NHTSA (202–366–1012).

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 30141(a)(1)(A), a motor vehicle that was not originally manufactured to conform to all applicable FMVSS shall be refused admission into the United States unless NHTSA has decided that the motor vehicle is substantially similar to a motor vehicle originally manufactured for importation into and sale in the United States, certified under 49 U.S.C.

[3] The dollar equivalent cost is derived from the Surface Transportation Board's Full Year Wage A&B data series using the appropriate employee group hourly wage rate that includes a 75-percent overhead charge.

30115, and of the same MY as the model of the motor vehicle to be compared, and is capable of being readily altered to conform to all applicable FMVSS.

Petitions for eligibility decisions may be submitted by either manufacturers or importers who have registered with NHTSA pursuant to 49 CFR part 592. As specified in 49 CFR 593.7, NHTSA publishes notice of each petition that it receives in the **Federal Register**, and affords interested persons an opportunity to comment on the petition. At the close of the comment period, NHTSA decides, on the basis of the petition and any comments that it has received, whether the vehicle is eligible for importation. The agency then publishes this decision in the **Federal Register**.

G&K Automotive Conversion, Inc, (Registered Importer R–90–007), of Santa Ana, California has petitioned NHTSA to decide whether nonconforming 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs are eligible for importation into the United States. The vehicles which G&K Automotive Conversion believes are substantially similar are MY 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs sold in the United States and certified by their manufacturer as conforming to all applicable FMVSS.

The petitioner claims that it compared non-U.S. certified MY 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs to their U.S. certified counterparts, and found the vehicles to be substantially similar with respect to compliance with most FMVSS.

G&K Automotive Conversion submitted information with its petition intended to demonstrate that non-U.S. certified MY 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs, as originally manufactured, conform to many applicable FMVSS in the same manner as their U.S.-certified counterparts, or are capable of being readily altered to conform to those standards. Specifically, the petitioner claims that the non-U.S. certified MY 2012–2014 Mercedes Benz G500 and G500 Cabriolet MPVs, as originally manufactured, conform to: FMVSS Nos. 102, *Transmission Shift Position Sequence, Starter Interlock, and Transmission Braking Effect,* 103, *Windshield Defrosting and Defogging Systems,* 104, *Windshield Wiping and Washing Systems,* 105, *Hydraulic and Electric Brake Systems,* 106, *Brake Hoses,* 108, *Lamps, Reflective Devices and Associated Equipment,* 113, *Hood Latch System,* 114, *Theft Protection and Rollaway Prevention,* 116, *Motor Vehicle Brake Fluids,* 118, *Power-Operated Window, Partition, and Roof Panel System,* 124, *Accelerator Control Systems,* 126, *Electronic Stability Control Systems,* 135, *Light Vehicle Brake Systems,* 138, *Tire Pressure Monitoring Systems,* 139, *New Pneumatic Radial Tires for Light Vehicles,* 201, *Occupant Protection in Interior Impact,* 202, *Head Restraints; Applicable at the Manufacturers Option until September 1, 2009,* 204, *Steering Control Rearward Displacement,* 205, *Glazing Materials,* 206, *Door Locks and Door Retention Components,* 207, *Seating Systems,* 208, *Occupant Crash Protection,* 209, *Seat Belt Assemblies,* 210, *Seat Belt Assembly Anchorages,* 212, *Windshield Mounting,* 214, *Side Impact Protection,* 216, *Roof Crush Resistance; Applicable unless a Vehicle is Certified to § 571.216a,* 219, *Windshield Zone Intrusion,* 225, *Child Restraint Anchorage Systems,* 301, *Fuel system integrity,* and 302, *Flammability of Interior Materials,* 401, *Interior trunk release.* Furthermore, the petitioner states the petition vehicle has the identical anti-theft devices as found on the U.S. Companion Model and therefore meets the requirements set forth in 49 CFR part 541. Likewise, the petitioner states the petition vehicle has identical bumpers as the U.S. Companion Model and therefore meets the requirements set forth in 49 CFR part 581.

The petitioner also contends that the subject non-U.S. certified vehicles are capable of being readily altered to meet the following FMVSS, in the manner indicated:

FMVSS No. 101, *Controls and Displays:* Programming of the speedometer to display Mph and miles. FMVSS No. 110, *Tire Selection and Rims and Motor Home/Recreation Vehicle Trailer Load Carrying Capacity Information for Motor Vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or Less:* Installation of the required tire information placard. FMVSS No. 111, *Rear Mirrors:* Inscription of the required warning statement on the face of the passenger mirror.

The petitioner additionally states that a vehicle identification plate must be affixed to the vehicle, near the left windshield pillar, to meet the requirements of 49 CFR part 565, as well as, a reference and certification label added to the left front door post area to meet the requirements of 49 CFR part 567.

Authority: 49 U.S.C. 30141(a)(1)(A), (a)(1)(B), and (b)(1); 49 CFR 593.7; delegation of authority at 49 CFR 1.95 and 501.8.

Otto G. Matheke III,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2020–27148 Filed 12–9–20; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Privacy Act of 1974

AGENCY: Internal Revenue Service, Treasury.

ACTION: Notice of a New Matching Program.

SUMMARY: Pursuant to the Privacy Act of 1974, as amended, and the Office of Management and Budget (OMB) Guidelines on the Conduct of Matching Programs, notice is hereby given of the conduct of the Internal Revenue Service (IRS) Data Loss Prevention Computer Matching Program. The program helps the IRS detect potential violations of security policies to determine whether there has been an actual violation by matching data from existing IRS systems of records.

DATES: Comments on this matching notice must be received no later than 30 days after date of publication in the **Federal Register**. If no public comments are received during the period allowed for comment, the re-established agreement will be effective March 24, 2021, provided it is a minimum of 30 days after the publication date.

Beginning and completion dates: The matches are conducted on an ongoing basis in accordance with the terms of the computer matching agreement in effect with the IRS as approved by the applicable Data Integrity Board(s). The term of this agreement is expected to cover the 18-month period, March 24, 2021 through September 23, 2022. Ninety days prior to expiration of the agreement, the parties to the agreement may request a 12-month extension in accordance with 5 U.S.C. 552a(o).

ADDRESSES: Inquiries may be sent by mail to the Office of Privacy, Governmental Liaison and Disclosure, Internal Revenue Service, 1111 Constitution Avenue NW, Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: David Silverman, Management and Program Analyst, IRS Privacy, Governmental Liaison and Disclosure, 202–317–6452 (not a toll-free number).

SUPPLEMENTARY INFORMATION: The notice of the matching program was last

published at 83 FR 42980–981 (August 24, 2018). Members of the public desiring specific information concerning an ongoing matching activity may request a copy of the applicable computer matching agreement at the address provided above.

PARTICIPATING AGENCIES:

IRS.

AUTHORITY FOR CONDUCTING THE MATCHING PROGRAM:

The Internal Revenue Service must safeguard information to ensure that it is kept confidential as required by the Internal Revenue Code, the Privacy Act of 1974, the Bank Secrecy Act, Title 18 of the United States Code, the Federal Information Security Management Act (FISMA), and other applicable laws that require safeguarding of information. Sending confidential information without sufficient protection is a violation of IRS security policy. This matching program will assist the IRS in ensuring that sensitive information is properly protected from unauthorized use or disclosure.

PURPOSE:

The purpose of this program is to detect and deter breaches of security policy by IRS employees, contractors, or other individuals who have been granted access to IRS information or to IRS equipment and resources, who send electronic communications in an insecure, unencrypted manner.

CATEGORIES OF INDIVIDUALS:

IRS employees, contractors, or other individuals who have been granted access to IRS information, equipment, and resources.

CATEGORIES OF RECORDS:

IRS will use any or all of the data elements in the listed systems of records to the extent necessary to accomplish a computer match. Data elements include, but not limited to, employee name, Social Security Number (SSN), employee number, address, email addresses; employee spouse's name, SSN, address; taxpayer name, Taxpayer Identification Number (TIN), address, tax return/account information, taxpayer entity information, including prior and current name; electronic transmission specifics, internet Protocol (IP) Address, computer machine name, terminal identification; general personnel and payroll records, etc. The information generated and/or obtained during these computer matches will be used by IRS employees in the performance of their official responsibilities. Access to this information is limited to those individuals who have a need to know the information in the performance of their official duties. These individuals are subject to criminal and civil penalties for the unauthorized inspection and/or disclosure of this information. During the execution of this program of computer matches and the resultant analyses or investigations, the records used may be duplicated by IRS employees only for use in performing their official duties. The information collected or generated as part of this program of computer matches may only be disclosed in accordance with the provisions of 5 U.S.C. 552a, 26 U.S.C. 6103, and any other applicable Federal privacy provisions.

SYSTEM(S) OF RECORDS:

The following systems of records maintained by the IRS and the Department of the Treasury Offices may be utilized:

1. Correspondence Files and Correspondence Control Files [Treasury/IRS 00.001]
2. Correspondence Files: Inquiries About Enforcement Activities [Treasury/IRS 00.002]
3. Employee Complaint and Allegation Referral Records [Treasury/IRS 00.007]
4. Taxpayer Advocate Service and Customer Feedback and Survey Records [Treasury/IRS 00.003]
5. Third Party Contact Records [Treasury/IRS 00.333]
6. Stakeholder Relationship Management and Subject Files [Treasury/IRS 10.004]
7. Volunteer Records [Treasury/IRS 10.555]
8. Annual Listing of Undelivered Refund Checks [Treasury/IRS 22.003]
9. File of Erroneous Refunds [Treasury/IRS 22.011]
10. Foreign Information System (FIS) [Treasury/IRS 22.027]
11. Individual Microfilm Retention Register [Treasury/IRS 22.032]
12. Subsidiary Accounting Files [Treasury/IRS 22.054]
13. Automated Non-Master File (ANMF) [Treasury/IRS 22.060]
14. Information Return Master File (IRMF) [Treasury/IRS 22.061]
15. Electronic Filing Records [Treasury/IRS 22.062]
16. CADE Individual Master File (IMF) [Treasury/IRS 24.030]
17. CADE Business Master File (BMF) [Treasury/IRS 24.046]
18. Audit Underreporter Case File [Treasury/IRS 24.047]
19. Acquired Property Records [Treasury/IRS 26.001]
20. Lien Files [Treasury/IRS 26.009]
21. Offer in Compromise Files [Treasury/IRS 26.012]
22. Trust Fund Recovery Cases/One Hundred Percent Penalty Cases [Treasury/IRS 26.013]
23. Record of Seizure and Sale of Real Property [Treasury/IRS 26.014]
24. Taxpayer Delinquent Account (TDA) Files [Treasury/IRS 26.019]
25. Taxpayer Delinquency Investigation (TDI) Files [Treasury/IRS 26.020]
26. Identification Media Files System for Employees and Others Issued IRS Identification [Treasury/IRS 34.013]
27. Security Clearance Files [Treasury/IRS 34.016]
28. Automated Background Investigations System [Treasury/IRS 34.022]
29. Audit Trail and Security Records [Treasury/IRS 34.037]
30. Treasury Payroll and Personnel System [Treasury/DO.001]
31. Treasury Child Care Tuition Assistance Records [Treasury/DO.003]
32. Public Transportation Incentive Program Records [Treasury/DO.005]
33. Treasury Financial Management Systems [Treasury/DO.009]

Ryan Law,

Deputy Assistant Secretary for Privacy, Transparency, and Records.

[FR Doc. 2020–27136 Filed 12–9–20; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Survey of U.S. Ownership of Foreign Securities as of December 31, 2020

AGENCY: Departmental Offices, Office of the Assistant Secretary for International Affairs, Department of the Treasury.

ACTION: Notice of reporting requirements.

SUMMARY: By this Notice, the Department of the Treasury is informing the public that it is conducting a mandatory survey of ownership of foreign securities by U.S. residents as of December 31, 2020. This Notice constitutes legal notification to all United States persons (defined below) who meet the reporting requirements set forth in this Notice that they must respond to, and comply with, this survey. The reporting form SHCA (2020) and instructions may be printed from the internet at: *https://www.treasury.gov/resource-center/data-chart-center/tic/Pages/forms-shc.aspx.*

Please note that when the TIC website is revised, the URL will be: *https://home.treasury.gov/data/treasury-international-capital-tic-system-home-page/tic-forms-instructions/forms-shc.*

SUPPLEMENTARY INFORMATION: *Definition:* Pursuant to 22 U.S.C. 3102(3) and (4): A person means any individual, branch, partnership, associated group, association, estate, trust, corporation, or other organization (whether or not organized under the laws of any State), and any government (including a foreign government, the United States Government, a State or local government, and any agency, corporation, financial institution, or other entity or instrumentality thereof, including a government-sponsored agency); and a United States person means any person resident in the United States or subject to the jurisdiction of the United States.

Who Must Report: The reporting panel is based upon the data submitted for the 2016 Benchmark survey and the June 2020 TIC report ''Aggregate Holdings of Long-Term Securities by U.S. and Foreign Residents'' (TIC SLT). Entities required to report will be contacted individually by the Federal Reserve Bank of New York. Entities not contacted by the Federal Reserve Bank of New York have no reporting responsibilities.

What To Report: This report will collect information on holdings by U.S. residents of foreign securities, including equities, long-term debt securities, and short-term debt securities (including selected money market instruments).

How To Report: Copies of the survey forms and instructions, which contain complete information on reporting procedures and definitions, may be obtained at the website address given above in the Summary. Completed reports can be submitted electronically via email at *SHC.help@ny.frb.org.* Inquiries can be made to the survey staff of the Federal Reserve Bank of New York at (212) 720–6300 or email: *SHC.help@ny.frb.org.* Inquiries can also be made to Dwight Wolkow at (202) 622–1276, email: *comments2TIC@do.treas.gov.*

When To Report: Data must be submitted to the Federal Reserve Bank of New York, acting as fiscal agent for the Department of the Treasury, by March 5, 2021.

Paperwork Reduction Act Notice: This data collection has been approved by the Office of Management and Budget (OMB) in accordance with the Paperwork Reduction Act and assigned control number 1505–0146. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid control number assigned by OMB. The estimated average annual burden associated with this collection of information is 49 hours per respondent for end-investors and custodians that file Schedule 3 reports covering their foreign securities entrusted to U.S. resident custodians, 146 hours per respondent for large end-investors filing Schedule 2 reports, and 546 hours per respondent for large custodians of securities filing Schedule 2 reports. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Department of the Treasury, Attention: Administrator, International Portfolio Investment Data Reporting Systems, Room 1050, Washington, DC 20220, and to OMB, Attention: Desk Officer for the Department of the Treasury, Office of Information and Regulatory Affairs, Washington, DC 20503. In light of the current pandemic, please also email comments to Dwight Wolkow at: *comments2TIC@do.treas.gov.*

Heidi Cohen,

Federal Register Liaison.

[FR Doc. 2020–27098 Filed 12–9–20; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF VETERANS AFFAIRS

Cost of Living Adjustments for Service-Connected Benefits

AGENCY: Department of Veterans Affairs.

ACTION: Notice.

SUMMARY: As required by the Veterans' Compensation Cost-of-Living Adjustment Act of 2020, the Department of Veterans Affairs (VA) is hereby giving notice of adjustments in certain benefit rates. These adjustments affect the compensation program.

DATES: These adjustments became effective on December 1, 2020, the date provided by Public Law 116–178.

FOR FURTHER INFORMATION CONTACT: Jessica Pierce, Policy and Procedures Staff, Compensation Service, Veterans Benefits Administration, Department of Veterans Affairs, 810 Vermont Avenue NW, Washington, DC 20420, 202–461–9700. (This is not a toll-free telephone number.)

SUPPLEMENTARY INFORMATION: Section 2 of Public Law 116–178 provides for an increase in each of the rates in sections 1114, 1115(1), and 1162 of title 38, United States Code. VA is required to increase these benefit rates by the same percentage as increases in the benefit amounts payable under title II of the Social Security Act. The increased rates are required to be published in the **Federal Register**.

The Social Security Administration has announced that there will be a 1.3 percent cost-of-living increase in Social Security benefits for 2021. Therefore, applying the same percentage, the following rates for VA's compensation program became effective on December 1, 2020:

Disability evaluation percent	Monthly rate
Disability Compensation [38 U.S.C. 1114]	
10	$144.14.
20	284.93.
30	441.35.
40	635.77.
50	905.04.
60	1,146.39.
70	1,444.71.
80	1,679.35.
90	1,887.18.
100	3,146.42.
(38 U.S.C. 1114(k) through (t)):	
38 U.S.C. 1114(k)	111.74.
38 U.S.C. 1114(l)	3,915.14.
38 U.S.C. 1114(m)	4,320.76.
38 U.S.C. 1114(n)	4,915.17.
38 U.S.C. 1114(o)	5,493.95.
38 U.S.C. 1114(p)	5,493.95.
38 U.S.C. 1114(r)	2,356.48; 3,510.69.
38 U.S.C. 1114(s)	3,521.85.
38 U.S.C. 1114(t)	3,510.69.
Additional Compensation for Dependents [38 U.S.C. 1115(1)]	
38 U.S.C. 1115(1):	
38 U.S.C. 1115(1)(A)	175.43.
38 U.S.C. 1115(1)(B)	303.90; 87.17.
38 U.S.C. 1115(1)(C)	117.32; 87.17.
38 U.S.C. 1115(1)(D)	140.79.
38 U.S.C. 1115(1)(E)	336.32.
38 U.S.C. 1115(1)(F)	281.57.
Clothing Allowance [38 U.S.C. 1162]	
	$841.36 per year.

Signing Authority

The Secretary of Veterans Affairs, 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. Brooks D. Tucker, Assistant Secretary for Congressional and Legislative Affairs, Performing the Delegable Duties of the Chief of Staff, Department of Veterans Affairs, approved this document on December 3, 2020, for publication.

Luvenia Potts,

Regulation Development Coordinator, Office of Regulation Policy & Management, Office of the Secretary, Department of Veterans Affairs.

[FR Doc. 2020–27092 Filed 12–9–20; 8:45 am]

BILLING CODE 8320–01–P

FEDERAL REGISTER

Vol. 85 Thursday,

No. 238 December 10, 2020

Part II

Department of Transportation

Federal Aviation Administration

14 CFR Parts 401, 404, 413, et al.

Streamlined Launch and Reentry License Requirements; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 401, 404, 413, 414, 415, 417, 420, 431, 433, 435, 437, 440, 450, and 460

[Docket No.: FAA–2019–0229; Amdt. No(s). 401–9; 404–7, 413–12, 414–4, 415–7, 417–6, 420–9, 431–7, 433–3, 435–5, 437–3, 440–5, 450–2, and 460–3]

RIN 2120–AL17

Streamlined Launch and Reentry License Requirements

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

ACTION: Final rule.

SUMMARY: This rule streamlines and increases flexibility in the FAA's commercial space launch and reentry regulations, and removes obsolete requirements. It consolidates and revises multiple regulatory parts and applies a single set of licensing and safety regulations across several types of operations and vehicles. The rule describes the requirements to obtain a vehicle operator license, the safety requirements, and the terms and conditions of a vehicle operator license.

DATES:

Effective date: This rule is effective March 10, 2021, except for amendatory instructions 3, 11, 17, 20, 27, 44 and 54, concerning §§ 401.5, 413.1, and 413.23, the removal of parts 415, 417, 431, and 435, and instructions 68 and 73 amending §§ 440.3 and 460.45, respectively, which are effective March 10, 2026.

Compliance: Affected parties, however, are not required to comply with the information collection requirements in part 450 until the Office of Management and Budget (OMB) approves the collection and assigns a control number under the Paperwork Reduction Act of 1995. The FAA will publish in the **Federal Register** a notice of the control number assigned by the Office of Management and Budget (OMB) for these information collection requirements.

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: For technical questions concerning this action, contact Randy Repcheck, Office of Commercial Space Transportation, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone (202) 267–8760; email *Randy.Repcheck@faa.gov.*

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The Commercial Space Launch Act of 1984, as amended and codified at 51 U.S.C. 50901–50923 (the Act), authorizes the Secretary of Transportation to oversee, license, and regulate commercial launch and reentry activities, and the operation of launch and reentry sites within the United States or as carried out by U.S. citizens. Section 50905 directs the Secretary to exercise this responsibility consistent with public health and safety, safety of property, and the national security and foreign policy interests of the United States. In addition, § 50903 requires the Secretary to encourage, facilitate, and promote commercial space launches and reentries by the private sector. As codified at 49 CFR 1.83(b), the Secretary has delegated authority to carry out these functions to the FAA Administrator.

This rulemaking amends the FAA's launch and reentry requirements, consolidating and revising multiple regulatory parts to set forth a single set of licensing and safety regulations across several types of operations and vehicles. It also streamlines the commercial space regulations by, among other things, replacing many prescriptive regulations with performance-based rules, and giving industry greater flexibility to develop means of compliance that maximize their objectives while maintaining public safety.

List of Abbreviations and Acronyms Frequently Used in This Document

AC—Advisory Circular
CE_C—Conditional expected casualty
E_C—Expected casualty
ELOS determination—Equivalent-level-of-safety determination
ELV—Expendable launch vehicle
FSA—Flight safety analysis
FSS—Flight safety system
RLV—Reusable launch vehicle

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I. Overview

Overview of Final Rule

This rule amends 14 CFR parts 415, 417, 431, and 435 by consolidating, updating, and streamlining all launch and reentry regulations into a single part 450. After March 10, 2026, parts 415, 417, 431, and 435 will be removed. This rule also revises multiple regulatory parts to apply a single set of licensing and safety regulations across several types of operations and vehicles. In addition, this rule replaces many prescriptive regulations with performance-based rules, giving industry greater flexibility to develop means of compliance that meet their objectives while maintaining public safety. Where possible, the FAA has adopted performance standards, and considered the prescriptive requirements for placement in advisory circulars (AC) that will identify possible means of compliance, but not the only means of compliance, with this rule. The goal of this approach is to afford the industry and the FAA the added flexibility of using new methods to better enable future innovative concepts and operations. While some of the provisions in this rule may increase the risk to public safety compared to the current regulations, such as the provisions that apply to neighboring operations personnel, the FAA has ensured that the increased risk is minimal and there is a corresponding public interest benefit.

Part 450 accommodates all vehicle operators, including hybrid vehicle operators. The revisions include more performance-based requirements, alternatives to flight abort and flight safety analysis (FSA) requirements based on demonstrated reliability, use of equivalent level of safety (ELOS) for the measurement of a high consequence event, and allowing application process alternatives as agreed to by the FAA.

Part 450 is divided into subparts A through D. Part 450 is organized by sections that have both safety requirements for what an operator must do to be safe and application requirements for what must be submitted in an application. By ''applicant,'' the FAA intends to reference an applicant for either a vehicle operator license, an incremental approval, a payload determination, a policy approval, or an environmental determination. By ''operator,'' the FAA intends to reference the holder of a license, which is consistent with the definition of ''operator'' in § 401.7.

This preamble will discuss in detail the safety framework encapsulated in part 450, part 450 requirements in sequential order, followed by corresponding and related changes to other parts, and cost implications for this rule.

i. Subpart A

Subpart A includes a general discussion on the application process, licensing scope and duration, and compliance dates. Pre-application consultation, which may include discussion of any applicable flexibilities in the application process, scope of license, and means of compliance, is required by part 413.

Figure 1 illustrates the licensing process. The licensing process begins with pre-application consultation, which sets the stage for an applicant to submit a license application. The application evaluation consists of five major components: (1) A policy review, (2) a payload review, (3) a safety review, (4) a determination of maximum probable loss (MPL) for establishing financial responsibility requirements, and (5) an environmental review. The license specifies the range of activities the licensee may undertake along with any limitations. Requirements after a license is issued encompass the licensee's responsibility for public safety and compliance with its license, representations in the license application, and FAA regulations. An important component of this compliance is the FAA's authority to perform safety inspections.

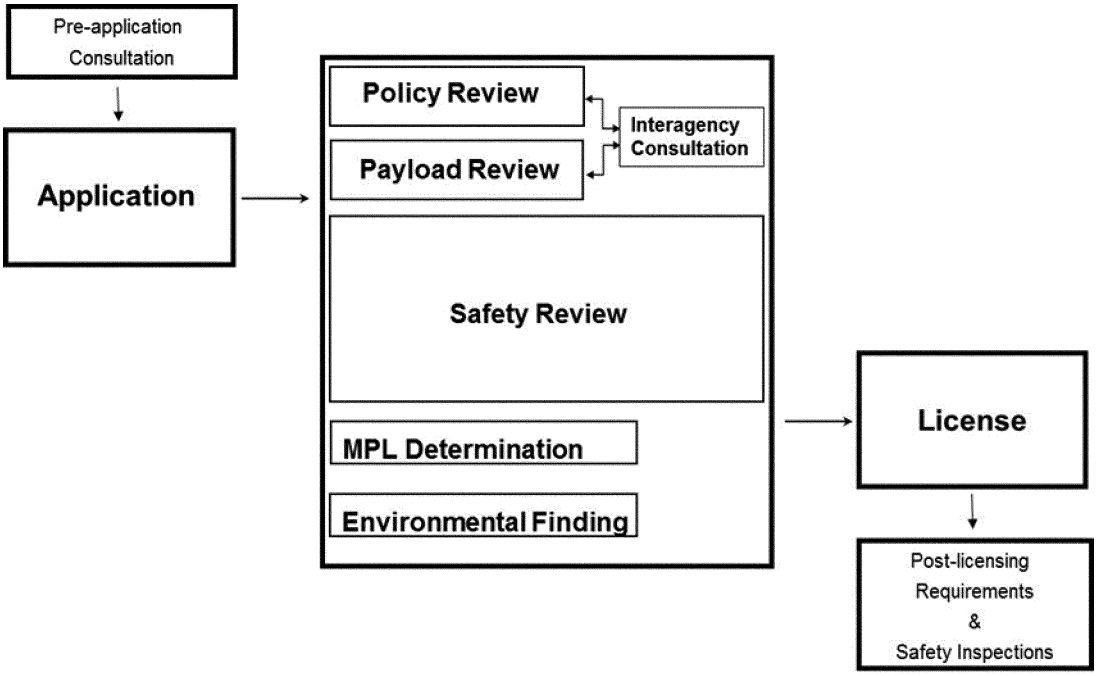


Figure 1

In the final rule, the FAA does not make any changes to the existing pre-application consultation provision, except to update the term ''safety approval'' to the newly adopted ''safety element approval.'' The FAA makes this change to delineate between the safety approval portion of a license application and a safety element approval that the FAA grants under Part 414. This distinction between terms will not affect industry.

During the pre-application consultation stage, an applicant will work with the FAA to develop an application and licensing process that best fits its proposed operation. This stage will focus on compliance planning and positioning the applicant to prepare an acceptable application, which will increase the efficiency of the licensing process. The length of pre-application consultation will vary based on the proposed operation. For example, pre-application consultations may be lengthy when involving new launch vehicles that are under development or with operators inexperienced with the FAA's regulations. Alternatively, pre-application consultation with experienced operators using proven vehicles from established sites may be considerably shorter.

During this stage, the FAA expects to discuss the following topics with an applicant: Entrance and exit criteria for pre-application consultation, the intended means of compliance to meet the regulatory requirements in part 450, the scope of the license, safety element approvals, incremental review, review period for license evaluation, compliance expectations, and time frames an operator is required to meet to satisfy part 450. Some of the topics allow for flexibility that can result in a more efficient licensing process for both the applicant and the FAA.

The rule allows an applicant and the FAA flexibility to establish the scope of the license. Determining the point at which launch begins will be discussed during pre-application consultation. The applicant will describe to the FAA its launch site and its intended concept of operations leading up to a launch, including any operations that are hazardous to the public. Once the FAA and the applicant have a mutual understanding of the applicant's intended concept of operations, the FAA will determine what constitutes hazardous pre-flight operations and thus the beginning of launch. The applicant will then scope its application materials based on this starting point.

In the Notice of Proposed Rulemaking (NPRM), the FAA proposed to set the scope of activity authorized by a vehicle operator license by identifying the beginning and end of launch and reentry. The final rule provides flexibility to scale the beginning of launch to the operation. Specifically, the FAA will identify the beginning and end of launch on a case-by-case basis and in consultation with an applicant. The final rule does not adopt the proposed default that hazardous ground pre-flight operations commence when a launch vehicle or its major components arrive at a U.S. launch site. Instead, the final rule identifies certain activities that qualify as hazardous pre-flight operations, including, but not limited to, pressurizing or loading of propellants into the vehicle or launch system, operations involving a fueled launch vehicle, the transfer of energy necessary to initiate flight, or any hazardous activity preparing the vehicle for flight. This rule also clarifies that hazardous pre-flight operations do not include the period between the end of the previous launch and launch vehicle reuse when the vehicle is in a safe and dormant state.

For the end of launch and reentry, the FAA replaces each use of ''vehicle stage'' in the proposed rule with ''vehicle component'' in the final rule. The FAA adopts this change in recognition that components other than vehicle stages may return to Earth. Also, the FAA now includes ''impact or landing'' in the end of launch and reentry sections in the scope of license requirements to accommodate increasing efforts to reuse components.

ii. Subpart B

Subpart B contains the requirements to obtain a vehicle operator license. The topics include incremental review and determinations, means of compliance,

policy review, payload review, safety review and approval, and environmental review. This rule retains the key components of a license application review: The policy review, payload review, safety review, MPL determination, and environmental review. This rule continues to allow operators to submit the payload, policy, environmental, and financial responsibility portions of its application independently of each other.

The final rule will also allow an applicant to submit an application for a safety review in modules using an incremental approach approved by the FAA. The safety review is typically the most complex part of the license application and usually involves submission of numerous documents. In this rule, the FAA has concluded that a structured approach agreed to during pre-application consultation will reduce regulatory uncertainty by allowing the FAA to affirm at an early stage of development that the proposed safety measure or methodology meets the FAA's requirements. An applicant must have its incremental review approach approved by the FAA prior to submitting its application so that the FAA can ensure that the modules can be reviewed independently and in a workable order under an agreed time frame.

The rule makes it easier for an applicant to seek a safety element approval in conjunction with its license application. A safety element approval is an FAA document containing the FAA determination a safety element, when used or employed within a defined envelope, parameter, or situation, will not jeopardize public health and safety or safety of property. A safety element includes a launch vehicle, reentry vehicle, safety system, process, service, or any identified component thereof; and qualified and trained personnel, performing a process or function related to licensed activities or vehicles. An applicant may also leverage existing safety element approvals by citing a safety element approval in another license application, thus streamlining the subsequent licensing process.

After the final rule becomes effective on March 10, 2021, operators holding an active launch or reentry license, or who have an accepted launch or reentry license application within 90 days after the effective date, may choose to operate under parts 415 and 417 for expendable launch vehicles (ELVs), part 431 for reusable launch vehicles (RLVs), or part 435 for reentry vehicles, until five years after the effective date of this rule.[1] All operators, including those exercising this provision, must come into compliance with this regulation's requirements for critical asset protection and collision avoidance (COLA) analysis beginning from the effective date of this rule. Any operator may also choose to operate under part 450 on the effective date of this rule. Operators conducting operations under parts 415, 417, 431 or 435 may submit requests for license renewals such that their license remains valid for up to five years after the effective date of this rule. A license renewal issued after the effective date of this rule will be valid for no longer than five years after the effective date of this rule.[2] All operators will need to comply with all parts of this rule five years after its effective date. Any operator may also choose to operate under part 450 on the effective date of this rule.

For an application for a license modification submitted after this rule becomes effective and within five years of the effective date, the FAA will determine the applicability of part 450 on a case-by-case basis. In determining whether to apply part 450 in evaluating a license modification under this scenario in consultation with the applicant, the FAA will consider the extent and complexity of the modification, whether the applicant proposes to modify multiple parts of the application, and if the application requires significant reevaluation.

The final rule allows most time frames to be determined during pre-application consultation, or during the application review process. An operator may propose alternative time frames for any of the requirements listed in the newly created Appendix A to part 404.

Compliance with the performance requirements in this rule may be demonstrated by using a means of compliance that is accepted by the FAA. Means of compliance may be government standards, industry consensus standards, or unique means of compliance developed by an individual applicant. During pre-application consultation, the FAA will work with applicants on compliance planning. The FAA will review the submitted means of compliance to determine whether they satisfy the regulatory safety standard.

For five requirements, an applicant must use a means of compliance the FAA has accepted in advance of submitting an application. Those requirements for which an applicant must use an accepted means of compliance in advance are identified in § 450.35 and include FSA methods, airborne toxic concentration and duration thresholds for any toxic hazards for flight, highly reliable flight safety systems (FSS), lightning commit criteria, and airborne toxic concentration and duration thresholds toxic hazard mitigation for ground operations. For all other requirements, an applicant may include an accepted means of compliance or a means of compliance the FAA has not yet accepted as part of its application for the FAA to review during application evaluation. The FAA will publish any publicly available means of compliance that it accepts. In addition, an operator may request that the FAA publish the operator's unique means of compliance, once reviewed and accepted.

The FAA evaluates five major components in an application for a vehicle operator license. The FAA adopts the proposed requirements for the policy review without modification. For the FAA to conduct a policy review, an applicant must identify the launch or reentry vehicle and its proposed flight profile, and describe the vehicle by characteristics that include individual stages and their dimensions, the type and amounts of all propellants, and maximum thrust. The final rule clarifies that a payload review is not required when the proposed launch or reentry vehicle will not carry a payload or when the payload is owned or operated by the U.S. Government. The FAA will continue to conduct safety reviews to determine whether an applicant is capable of conducting a launch or reentry without jeopardizing public health and safety and safety of property as specified in §§ 415.103, 431.31(a), and 435.31. Finally, the FAA adopts with revisions the proposed requirements for environmental review. The revisions include clarification on the FAA requirements for an Environmental Assessment (EA) and the FAA's responsibility to determine whether a Categorical Exemption (CATEX) applies, in accordance with current regulations. The MPL calculation and financial responsibility requirements are discussed under Subpart D.

iii. Subpart C

Subpart C addresses safety requirements. In the final rule, the FAA revises numerous sections under

[1] The FAA refers to these licenses as ''legacy licenses'' throughout this preamble. After that time, all operators must come into compliance with the new regulations.

[2] Operators holding a part 431 mission operator license have a 2-year renewable period, operators holding a part 435 reentry operator license have a 2-year renewable period, and operators holding a part 415 launch operator license have a 5-year renewable period.

subpart C in response to public comments on the proposed rule, so that the rule is more performance-based. Subpart C includes regulations for key areas of concern to Federal launch or reentry sites that had not been covered in previous FAA regulations (*e.g.,* the treatment of neighboring operations personnel and critical assets, including critical payloads). Throughout this document, the terms ''Federal launch or reentry sites'' and ''Federal sites'' replace the NPRM's use of ''Federal launch range.''

The FAA structured the rule to facilitate elimination of duplication of the requirements of Federal launch or reentry sites by incorporating critical asset protections, to avoid the need for Federal sites to impose this requirement. The rule also creates a path for the FAA to determine that a Federal launch or reentry site's ground safety processes, requirements, and oversight are not inconsistent with the Secretary's statutory authority over commercial space activities.

The safety criteria in § 450.101 (Safety Criteria) set the public and property safety criteria that must be met before an operator may initiate the flight of a launch or reentry vehicle.[3] The quantitative safety criteria continue to be the linchpin requirement for flight safety, which is fundamental for all operators. There are quantitative risk criteria for collective risk, individual risk, and aircraft risk. The final rule applies collective and individual risk criteria to people on waterborne vessels, enabling risk management techniques that previously required a waiver. The rule carves out neighboring operations personnel on a launch or reentry site as a separate category of the public subject to different risk criteria. This rule also adds risk criteria for the protection of critical assets essential to the national interests of the United States, including a more stringent requirement for the protection of critical payloads. The final rule uses conditional risk management to ensure (1) mitigations, such as flight abort, will be implemented to protect against high consequence events, and (2) implementation of mitigations will produce reasonable conditional risks.

The rule allows for neighboring operations personnel to be protected as members of the public, but to a less stringent risk threshold as compared to other members of the public. In the final rule, the FAA adopts the proposed requirements on neighboring operations personnel in §§ 401.7, 440.3, 450.101(a) and (b), and 450.137 (Far-field Overpressure Blast Effect Analysis) paragraph (c)(6), but removes the phase ''as determined by the Federal or licensed launch or reentry site operator'' from the definition of ''neighboring operations personnel'' in § 401.7. Instead, the Federal or licensed site operator will determine those persons who are eligible for neighboring operations personnel status in coordination with the operators at the site and in accordance with definition in § 401.7. A site operator at a non-Federal site will have the option to designate certain personnel as neighboring operations personnel.

In the final rule, critical assets include property, facilities, or infrastructure necessary to maintain national security, or assured access to space for national priority missions. In the final rule, the FAA does not adopt the proposed requirement for operators to calculate the risks to critical assets in preparing a flight hazard analysis, debris analysis, and debris risk analysis. The FAA anticipates that it will perform all critical asset and critical payload risk assessments for commercial space transportation operations involving non-Federal sites.

Under § 450.101(c) of the NPRM, the FAA proposed to require an operator to use flight abort as a hazard control strategy if the consequence of any reasonably foreseeable vehicle response mode, in any one-second period of flight, is greater than 1×10^{-3} CE_C for uncontrolled areas. The FAA amends the title of § 450.101(c) from ''Flight Abort'' in the NPRM to ''High Consequence Event Protection'' in the final rule, because the final rule allows an operator to use a method other than flight abort in certain situations in which the operator can show sufficient protection against high consequence events. The FAA retains the CE_C requirement as a quantitative criterion that an applicant must use to measure high consequence events, but revises the final rule to allow ELOS for the CE_C requirement. The final rule also allows options for how an applicant may protect against a low likelihood, high consequence event in uncontrolled areas for each phase of flight, such as using flight abort in accordance with § 450.108 (Flight Abort) or demonstrating that CE_C is below a certain threshold without using flight abort.

The FAA adopts with revisions the proposal that an operator must implement and document a system safety program throughout the operational lifecycle of a launch or reentry system in § 450.103 (System Safety Program). The system safety program includes a safety organization, hazard management, configuration management and control, and post-flight data review. In the final rule, the FAA removes the proposed term ''operational'' to clarify that the regulation applies to hazards throughout the lifecycle of a launch or reentry system—not just to operational hazards. The FAA also does not adopt the proposed requirement in § 450.105 to conduct a preliminary safety assessment, because that requirement has been replaced with a requirement to conduct a functional hazard analysis under the Hazard Control Strategies section in the final rule.

In the NPRM, the FAA proposed under the Hazard Control Strategies section (§§ 450.107 to 450.111) that, for each phase of a vehicle's flight, an operator would not need to conduct a flight hazard analysis for that phase of flight if the public safety and safety of property hazards identified in the preliminary safety assessment could be mitigated adequately to meet the requirements of proposed § 450.101 using physical containment, wind weighting, or flight abort. In the final rule, the FAA concludes that an operator must use one or more of the hazard control strategies defined in §§ 450.108 through 450.111 to meet the safety criteria. The FAA also adds a new paragraph to this section to address how an operator determines its hazard control strategy or strategies for any phase of flight during a launch or reentry.

The FAA adopts proposed § 450.108, which is a consolidation and revision of several proposed sections associated with flight abort requirements in the NPRM. As a result of this consolidation, the FAA removes the flight abort related requirements in §§ 450.123, 450.125, 450.127, and 450.129. The requirements in these sections have been revised to be performance-based standards included in § 450.108(c), which addresses flight safety limits objectives, and § 450.108(d), which addresses flight safety limits constraints.

[3] The FAA changes the title of § 450.101 from ''public safety criteria'' in the NPRM to ''safety criteria'' in the final rule. This is because the FAA changed the definition of ''public'' in new § 401.7 of the final rule. In the NPRM, ''public'' was defined to include ''people *and property* that are not involved in supporting the launch or reentry and includes those people *and property* that may be located within the launch or reentry site, such as visitors, individuals providing goods or services not related to launch or reentry processing or flight, and any other operator and its personnel.'' In the final rule, the FAA removed references to property, limiting the scope of the term ''public'' to people. This was done to provide better clarity throughout part 450 regarding the protection of people, property, or both. Because § 450.101 includes criteria for both people and property, the FAA removes ''public'' from the title.

Section 450.109 (Flight Hazard Analysis) details requirements for an operator using a flight hazard analysis as its hazard control strategy for one or more phases of flight. A flight hazard analysis must identify, describe, and analyze all reasonably foreseeable hazards to public safety and safety of property resulting from the flight of a launch or reentry vehicle, mitigate hazards as appropriate, and validate and verify the hazard mitigations. The FAA revises the final rule to reflect that performing a flight hazard analysis is included as a hazard control strategy to derive hazard controls for the flight, or phase of flight, of a launch or reentry vehicle.

Regardless of the hazard control strategy chosen or mandated an operator must conduct an FSA to demonstrate quantitatively that a launch or reentry meets the safety criteria for debris, far-field overpressure, and toxic hazards. An operator may be required to conduct additional analyses to use flight abort or wind weighting hazard control strategies. The FAA anticipates that an operator will be required to conduct some FSA for at least some phases of flight, regardless of the hazard control strategy chosen or mandated. For example, an FSA must determine flight hazard areas for any vehicle with planned debris impacts capable of causing a casualty.

The FAA revises the FSA requirements in § 450.113 (Flight Safety Analysis Requirements—Scope), which establish the portions of flight for which an operator would be required to perform and document an FSA. An operator must perform and document an FSA for all phases of flight, unless otherwise agreed to by the FAA. The FAA may agree there is no need for an FSA for certain phases of flight based on demonstrated reliability for any launch or reentry vehicle, instead of just for hybrid vehicles as proposed in the NPRM. The FAA expands this exception because, conceivably, an operation involving a vehicle other than a hybrid could have an extensive and safe enough flight history to demonstrate compliance with the risk criteria in § 450.101 based on empirical data in lieu of the traditional risk analysis.

An FSA generally consists of a set of quantitative analyses used to determine flight commit criteria, flight abort rules, flight hazard areas, and other mitigation measures, and to demonstrate compliance with the safety criteria in § 450.101. In the NPRM, the FAA proposed 15 sections associated with FSA requirements in §§ 450.113 to 450.141. The final rule moves requirements associated with flight safety limits to § 450.108 and condenses the remaining FSA requirements into 11 performance-based sections that cover the scope of the analyses, general methodology requirements, and specific sections on normal trajectories, malfunction trajectories, hazardous debris characterization, population exposure, probability of failure, flight hazard areas, debris risks, and far-field overpressure blast effects. The FAA moved some of the proposed FSA requirements such that an operator could generally perform the analyses in the order that they appear in the final rule, if they choose.

The FAA revises the FSA sections to be more performance-based than what was proposed in the NPRM. Specifically, the FAA revises the FSA requirements to identify their fundamental purpose, the essential constraints, and the objectives in each section. The FSA requirements in the final rule are consistent with current practice, but the rule articulates important, often misunderstood, aspects of flight analysis such as the creation of hazard areas and other operating constraints necessary to protect public health and safety and safety of property.

Sections 450.139 (Toxic Hazards for Flight) and 450.187 (Toxic Hazards Mitigation for Ground Operations) contain the requirements for toxic release analysis. In the final rule, the FAA adopts §§ 450.139 and 450.187 with some revisions. The FAA clarifies that operators are not required to perform a toxic release hazard analysis for kerosene-based fuels unless directed by the FAA. Also, the FAA revises the requirements for performing toxic containment.

In the NPRM, § 450.111 contained computing systems and software requirements. In the final rule, the FAA revises and relocates the requirements for computing systems and software to § 450.141 (Computing Systems and Software). In response to comments, the FAA revises the requirements of § 450.141 to be more performance-based, and levies requirements for computing system safety items in proportion to their criticality instead of the item's level of autonomy. The final rule also requires independent verification and validation for computing system safety items that meet the definition of ''safety-critical'' in § 401.7.

The requirements of § 450.143 (Safety-Critical System Design, Test, and Documentation) apply to all safety-critical systems except highly reliable FSS and safety-critical software items, which are regulated by the requirements in §§ 450.145 and 450.141 respectively. In the final rule, the FAA revises the reference to FSS requirements in § 450.143(a); amends § 450.143(b) to include other means of compliance and broader safe design concepts; and removes the term ''vehicle'' in § 450.143(c) because safety-critical systems can be located off-vehicle. In addition, the FAA amends the application requirements in § 450.143(f) to require that applicants describe the method used to validate predicted operating environments and any standards used for each safety-critical system.

Section 450.145 (Highly Reliable Flight Safety System) contains the requirements for certain FSS. The FAA revises § 450.145 to apply to a highly reliable FSS, which consists of any onboard portion and if used, any ground-based, space-based, or otherwise not onboard portion of the system. Conventional FSS with airborne flight termination receivers and ground-based command transmitter systems will have both airborne and ground-based subsystems. The final rule provides additional flexibility for operations where the CE_C is between 1×10^{-2} and 1×10^{-3} and exempts the FSS for such operations from the requirements of § 450.145; however, the FSS for such operations must still meet the requirements of § 450.143. The FAA makes these changes to scope the FSS design, testing, and analysis more closely to potential consequence and risk. These changes will reduce burden on operators that have a lower potential for causing high consequence events. The FAA also removes the reliability threshold required of an FSS for operations where CE_C is between 1×10^{-2} and 1×10^{-3}. The final rule provides that an FSS required for operations for which the CE_C is between 1×10^{-2} and 1×10^{-3} must meet the requirements of § 450.143.

Section 450.147 (Agreements) requires a vehicle operator to have a written agreement with any entity that provides a service or use of property to meet a requirement in part 450. In the final rule, the FAA requires an operator to enter into multiple agreements if the operator works with multiple entities. Also, operators will continue to be required to enter into agreements with the appropriate entities for launches and reentries that cross airspace or impact water not under U.S. jurisdiction.

Section 450.153 contains the requirements for radio frequency. In the NPRM, the FAA proposed that an operator would be required to identify each frequency, all allowable frequency tolerances, and each frequency's intended use, operating power, and

source; and provide for the monitoring of frequency usage and enforcement of frequency allocations. In the final rule, the FAA adopts the proposed requirements with modifications to the performance-based objectives central to radio frequency management. Operators will be required to ensure that radio frequency does not adversely affect the performance of FSS or safety-critical systems, and to coordinate radio frequency with local and Federal authorities.

Section 450.157 contains the requirements for communications. In the NRPM, the FAA proposed that personnel that have authority to issue ''hold/resume,'' ''go/no go,'' and abort commands must monitor each common intercom channel during countdown and flight. The FAA does not adopt the proposal because it was overly prescriptive.

Section 450.161 (Control of Hazard Areas) contains the control of hazard areas. In the final rule, the FAA does not remove the requirement for an operator to verify that warnings have been issued when the operator relies on another party to publicize those warnings. Instead, the FAA clarifies that the requirement may be met by demonstrating due diligence pursuant to agreements that the operator has with that party and notifying the FAA of any deviations from the agreements by any party. The FAA also adds an application requirement for the applicant to give a description of how the applicant will provide for any publication of flight hazard areas.

In the final rule, the FAA does not adopt the four mishap categories proposed in the NPRM. The FAA agrees with commenters that the regulatory requirements for the proposed mishap classes, from most severe (Class 1) to least severe (Class 4), were largely the same, and concludes that the mishap classes are not needed to achieve the objective of consolidating mishap-related terms and streamlining the requirements to report, respond to, and investigate mishaps. Instead, the FAA combines the substantive criteria of Mishap Classes 1–4 under the definition of ''mishap.'' The revised definition in the final rule describes events that constitute a mishap. The requirements to report, respond to, and investigate mishaps are incumbent upon an operator regardless of a mishap's severity.

Section 450.173 (Mishap Plan—Reporting, Response, and Investigation Requirements) contains the requirements for the mishap plan. In the final rule, the FAA does not adopt the proposed requirement for a licensee to cooperate with FAA and NTSB investigations contained in the NPRM. The FAA finds this requirement duplicative of § 450.13, which states that a vehicle operator license does not relieve a licensee of its obligations to comply with all applicable requirements of law or regulation that may apply to its activities. Also, the final rule standardizes criteria for mishap plans across all of 14 CFR Chapter III by making § 450.173 applicable to launch and reentry licensees, experimental permittees, and site operators.

The FAA proposed to give license applicants and licensees the option to pre-coordinate testing activities with the FAA. In the final rule, the FAA clarifies that § 450.175 (Test-induced Damage) will only apply to licensees or license applicants who choose to apply for the exception. The final rule also allows an operator to coordinate the possibility of test-induced damage prior to an operation and exclude damage meeting certain requirements from constituting a mishap, thereby reducing unnecessary reporting.

v. Subpart D

Subpart D addresses the terms and conditions of a vehicle operator license. This includes compliance monitoring (§ 450.209), material changes and continuing accuracy (§ 450.211), pre-flight reporting (§ 450.213), post-flight reporting (§ 450.215), and registration of space objects (§ 450.217). In the final rule, the FAA adopts these sections as proposed with the exception of revisions to § 450.213 (Pre-flight Reporting) as described below.

The final rule makes few changes to the post-licensing requirements, for which the final rule standardizes requirements for all launches and reentries from Federal sites and commercial spaceports or exclusive use launch sites. In line with the previous requirements, operators will provide information and comply with reported collision avoidance closures. A Federal agency will continue to provide operators the appropriate launch or reentry closures, but the rule allows the possibility of some other entity's providing this service in the future. The final rule offers operators flexibility, in coordination with the FAA, to use different timelines for the submission of pre-flight and post-flight reports. The FAA revises § 450.213(d) to allow an operator the flexibility to identify an appropriate time frame in coordination with the FAA. The FAA also revises § 450.217(c) so that licensees will only need to notify the FAA that they removed an object from orbit if removal occurs during or immediately after licensed activities.

II. Background

This rulemaking arose from work by the National Space Council that led to President Donald J. Trump's Space Policy Directive-2 (SPD–2) in May 2018, directing the U.S. Department of Transportation to streamline the regulations governing commercial space launch and reentry licensing. The goals of this streamlining include creating a single licensing regime for all types of commercial space flight launch and reentry operations, and replacing prescriptive requirements with performance-based criteria. The final rule is consistent with DOT's regulations under 49 CFR 5.5(e), which instruct that regulations should be technologically neutral, and, to the extent feasible, should specify performance objectives, rather than prescribing specific conduct that regulated entities must adopt.

On March 8, 2018, the FAA chartered the Streamlined Launch and Reentry Licensing Requirements Aviation Rulemaking Committee (ARC) to provide a forum for a broad range of stakeholders from the aviation and space communities to discuss regulations to set forth procedures and requirements for commercial space transportation launch and reentry licensing. The FAA tasked the ARC with developing recommendations for a performance-based regulatory approach in which the regulations set forth the safety objectives to be achieved while providing the applicant flexibility to produce tailored and innovative means of compliance.

On April 30, 2018, the ARC submitted its final recommendation report to the FAA.[4] The FAA addressed the recommendations in more detail throughout the NPRM. This final rule incorporates recommendations provided by the ARC.

On March 26, 2019, the FAA posted on its website an NPRM titled ''Launch and Reentry Licensing Requirements'' that would revise parts 401, 404, 413, 414, 415, 417, 420, 431, 433, 435, 437, and 440, and create a new part 450. In the NPRM, the FAA proposed to streamline and increase flexibility in the FAA's commercial space launch and reentry regulations, remove obsolete requirements, consolidate and revise multiple regulatory parts, and apply a single set of licensing and safety

[4] Streamlined Launch and Reentry Licensing Requirements ARC, *Recommendations Final Report* (April 30, 2008). The ARC Report is available for reference in the docket (Docket FAA–2019–0229).

regulations across several types of operations and vehicles.

On April 15, 2019, the FAA published this NPRM in the **Federal Register** (85 FR 15296). The initial comment period was 60-days from the date of publication, ending on June 14, 2019.

In the ensuing month, commenters submitted fifty-six requests for an extension of the comment period to a total of 120 days, or until August 13, 2019.

In response, on May 31, 2019, the FAA published an extension of the comment period on the NPRM (84 FR 25207), for an additional 45-days to July 30, 2019, to allow commenters more time to analyze the proposed rule.

On June 14, 2019, the FAA posted to the docket a response [5] to MLA Space, LLC, which had requested that the FAA reconvene the ARC to engage in dialogue regarding the NPRM. In the response, the FAA stated its belief that engagement with industry in the form of an ARC, a public meeting, or through a special session of Commercial Space Transportation Advisory Committee (COMSTAC) would not be beneficial at that point in the rulemaking process. The FAA encouraged members of industry to submit any questions requesting clarification regarding the NPRM to the docket.

On July 16, 2019, the FAA posted to the docket the first of its responses [6] to commenters' questions requesting clarification. Also on July 16, 2019, the FAA posted a statement [7] to the docket encouraging commenters to post any further requests for clarification in the docket as soon as possible. That statement reasserted the FAA's judgment that further engagement with industry through a public meeting to have clarifying dialogue regarding the NPRM would not be beneficial, but also offered to entertain meetings in the month of July 2019 with members of the public who wished to provide to the FAA their information bearing on the proposed rule.

Subsequently, the FAA met with Blue Origin,[8] the Coalition for Deep Space Exploration,[9] Space Exploration Technologies Corp. (SpaceX),[10] Virgin Galactic,[11] and Virgin Orbit [12] to receive their clarifying questions and a preview of their comments on the NPRM.[13]

On July 22, 2019, the FAA published a second extension of the comment period to the NPRM (84 FR 35051). To provide commenters with sufficient time to review the FAA's clarifications in response to the commenter's questions, the FAA extended the comment period to August 19, 2019.[14]

On August 16, 2019, the FAA posted its response to the docket [15] to commenters' questions for clarification received by July 12, 2020, and July 29, 2019.

On August 19, 2019, the comment period closed, with a total of 155 submissions from 85 commenters, and two submissions containing proprietary information. Of these comments, 62 requested an extension of the comment period, 10 requested to reconvene the ARC, 29 requested a public meeting, 18 requested a Supplemental Notice of Proposed Rulemaking (SNPRM), 18 contained clarifying questions for parts of the NPRM, and 53 comments contained substantive feedback regarding the proposed rule. The FAA discusses the adjudication of these comments in more detail later in the preamble.

III. Discussion of the Rule

A. Safety Framework

[5] *See* FAA–2019–0229–0088.

[6] *See* FAA–2019–0229–0106.

[7] *See* FAA–2019–0229–0107.

[8] *See* FAA–2019–0229–0127.

[9] *See* FAA–2019–0229–0178.

[10] *See* FAA–2019–0229–0129.

[11] *See* FAA–2019–0229–0128.

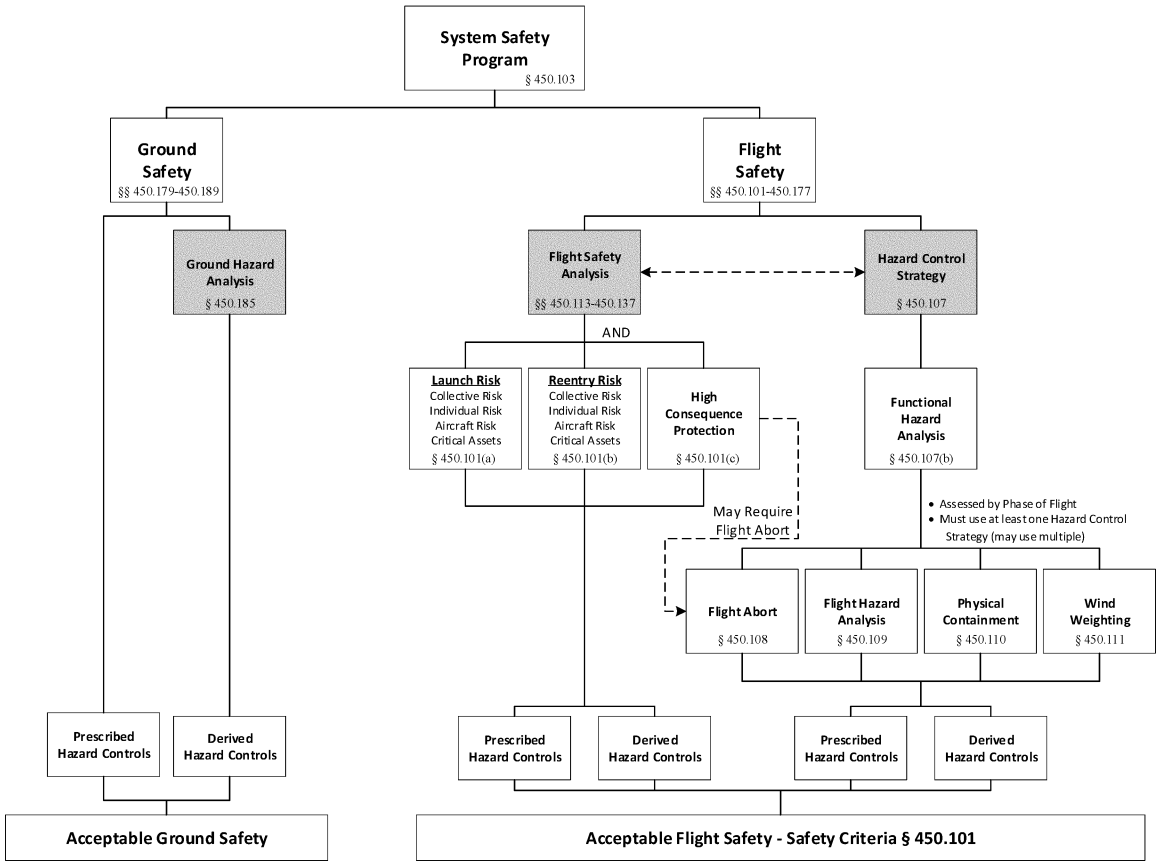
[12] *See* FAA–2019–0229–0126.

[13] Since the information provided at these meetings is already captured in these commenters' clarifying questions or comments submitted to the docket, the FAA gave these commenters the option of not posting to the docket a summary of the meeting, as required by the FAA's Statement Regarding Requests for Public Meetings (*see* FAA–2019–0229–0107), as this would be a duplicative effort.

[14] *See* 84 FR 35051.

[15] *See* FAA–2019–0229–0134 and FAA–2019–0229–0135.

Figure 2: Safety Framework



General. The final rule relies on a safety framework that provides the flexibility needed to accommodate current and future launch and reentry operations. The safety framework encompasses both ground safety and flight safety. Acceptable safety for ground operations is achieved primarily through a process-based hazard analysis and certain prescribed hazard controls. Acceptable safety for flight operations is achieved through several elements discussed further in this preamble section. The FAA identifies specific safety criteria and requirements in § 450.101 that must be met before a launch or reentry can take place, including collective risk, individual risk, aircraft risk, risk to critical assets, protection against high consequence events, disposal of orbiting stages, risk to people and property on orbit, and notification of planned impacts.

System Safety Program. All operators are required to have a system safety program that establishes system safety management principles for both ground safety and flight safety throughout the operational lifecycle of a launch or reentry system. The system safety program includes a safety organization, hazard management, configuration management and control, and post-flight data review.

Hazard Control Strategies. To address the wide variety of commercial launch and reentry systems and operations concepts, the final rule includes four hazard control strategies. An operator can use multiple hazard control strategies during flight because different strategies may be appropriate for different phases of flight. Different hazard control strategies may also be appropriate during any one phase of flight to protect different sets of people and property. The hazard control strategies are physical containment, wind weighting, flight abort, and flight hazard analysis.

- Physical containment would most likely be used for low energy test flights, when a launch vehicle does not have sufficient energy for any hazards associated with its flight to reach the public or critical assets.
- Wind weighting is traditionally used in the launch of unguided suborbital launch vehicles, otherwise known as sounding rockets, where the operator adjusts launcher azimuth and elevation settings to correct for the effects of wind conditions at the time of flight to provide impact locations for the launch vehicle or its components that will ensure compliance with the safety criteria in § 450.101.
- Flight abort is the traditional safety approach for expendable launch vehicles, and is a process to limit or restrict the hazards to public safety and the safety of property presented by a launch vehicle or reentry vehicle, including any payload, while in flight by initiating and accomplishing a controlled ending to vehicle flight. With the exception of phases of flight with demonstrated reliability, flight abort is mandated as a hazard control strategy if the potential for a high consequence event is above a certain threshold.
- Flight hazard analysis is the traditional safety approach for reusable launch vehicles, and is the most flexible hazard control strategy because an operator derives specific hazard controls unique to its launch or reentry vehicle system and operations concept. Flight hazard analysis is mandated as a hazard control strategy if the other three hazard control strategies cannot mitigate the safety hazards sufficient to meet the safety criteria of § 450.101.

An operator determines the appropriate hazard control strategy by conducting a functional hazard analysis.

Flight Safety Analyses. Regardless of the hazard control strategy chosen or mandated, an operator is required to conduct several FSA. These include trajectory analyses for normal and malfunction flight, a debris analysis, a population exposure analysis, and a probability of failure analysis. These analyses provide input to a debris risk analysis, a far-field overpressure blast effects analysis, and a toxic hazard analysis that together demonstrate compliance with the safety criteria of § 450.101, and provide input to a flight hazard area analysis.

Derived Hazard Controls. With respect to flight operations, an operator would derive several hazard controls by conducting the FSA and, if necessary, a flight hazard analysis. Because hazard controls are derived from these analyses, they are not specifically addressed in part 450.

Prescribed Hazard Controls for Computing Systems and Software and Safety-Critical Hardware. Regardless of the hazard controls derived from a flight hazard analysis and FSA, the FAA requires many other hazard controls. The first set of hazard controls includes requirements for computing systems and software, safety-critical systems, and highly reliable FSS.

Other Prescribed Hazard Controls. The second set of hazard controls have historically been necessary to achieve acceptable flight safety. These include requirements for (1) written agreements, (2) safety-critical personnel qualifications, (3) work shift and rest requirements, (4) radio frequency management, (5) readiness, (6) communications, (7) pre-flight procedures, (8) control of hazard areas, (9) lightning hazard mitigation, (10) flight commit criteria, (11) tracking, (12) collision avoidance, (13) safety at the end of launch, and (14) mishap plans.

Ground Safety. With respect to the safety of ground operations, the safety framework includes (1) coordination with a site operator, (2) explosive siting, (3) a ground hazard analysis, (4) toxic hazard mitigations, and (5) prescribed hazard controls addressing visitors, countdown aborts, fire suppression, and emergency procedures. These together provide an acceptable set of public safety considerations for ground operations.

B. Detailed Discussion of the Final Rule

1. Prescriptive vs Performance-Based Regulations, ELOS, Safety Case

i. Prescriptive

The FAA sought in the NPRM to propose changes that would convert many of its prescriptive requirements to more performance-based requirements that would allow for different means of compliance. The FAA received several comments stating generally that the proposed rule was still too prescriptive. The Commercial Spaceflight Federation (CSF) and SpaceX commented that some of the proposed requirements would unnecessarily drive applicants to a burdensome equivalent level of safety (ELOS) process as a default. Blue Origin recommended broadly that the FAA remove all prescriptive portions of the proposed rule.[16]

The FAA agrees that some of the requirements in proposed part 450 were unnecessarily prescriptive, particularly those for software and FSA. The FAA has modified those requirements to remove unnecessary prescriptiveness and provide additional flexibility while still preserving safety and providing regulatory clarity. For many of the requirements amended for this purpose in the final rule, the prescriptive parts of the proposal will be moved to a corresponding AC as guidance on means of compliance. Specific changes to the requirements are discussed later in this preamble.

Several commenters, including Blue Origin, CSF, and SpaceX, also stated that the FAA should base its new requirements on parts 431 and 435 and add details on how to comply through guidance. CSF also stated that the FAA ignored the draft regulatory text provided by the ARC, which used parts 431 and 435 as a basis for updated rules.

The FAA disagrees that parts 431 and 435 should be used as the sole basis for part 450. Part 431 depends on an operator to use the system safety process to derive hazard controls, which as reflected in part 450, is appropriate for some launch and reentry vehicle systems and operations. However, as also reflected in part 450, not all launch and reentry vehicle systems and operations require an operator to derive hazard controls through the system safety process. Specifically, physical containment, wind weighting, and, most importantly, flight abort are often sufficient. Part 450 incorporates the flexibility of part 431, but acknowledges the acceptability of other hazard control strategies. Part 450 also builds on the precedent set by part 431's limits on the foreseeable consequences of a failure in terms of conditional expected casualties and establishes a less stringent threshold.[17] Furthermore, the FAA stated in the NPRM that it would not specifically address the ARC's proposed regulatory text because that regulatory text did not receive broad consensus within the ARC.

One individual commenter noted that streamlining was long overdue. Another individual commenter noted that the proposed rule is longer and more complicated than the rule it proposes to replace, and that past FAA approaches led to codifying Federal launch and reentry site requirements, which the Federal sites subsequently changed such that they no longer matched the FAA requirements.

In response, the FAA notes that the proposed regulation combined elements from parts 415, 417, 431, and 435. Part 450 is shorter than parts 415 and 417 and more performance-based. Although it is longer than parts 431 and 435, part 450 is more flexible and encompasses more types of launch and reentry operations. This final rule allows operators to use a means of compliance that will accommodate customized operations, changing technologies, and innovation.

ii. Equivalent Level of Safety (§ 450.37)

In the NPRM, the FAA proposed in § 450.37 (Equivalent Level of Safety) that for all requirements in part 450, except § 450.101, an applicant may clearly and convincingly demonstrate that an alternative approach provides an equivalent level of safety (ELOS) to the requirement.

In the final rule, the FAA revises § 450.37 so that only some portions of § 450.101—specifically § 450.101(a), (b), (c)(1), (c)(3), (d), (e)(1), and (g)—are excluded from eligibility for an ELOS approach. This change allows an applicant to propose an equivalent level of safety to the orbital debris requirement in § 450.101(e)(2) and the notification of planned impacts requirement in § 450.101(f). Most significantly, this change also allows an applicant to propose an equivalent level of safety to the use of a CE_C of 1×10^{-3}

[16] Blue Origin submitted to the rulemaking docket a letter to Admiral James Ellis, Jr, USN (ret.), Chairman, Users' Advisory Group, National Space Council, in which Blue Origin expressed concerns with the NPRM. The letter encouraged Adm. Ellis to communicate the concerns to the Administration and the members of the National Space Council and advise the Office of the Secretary of Transportation and FAA to engage further with industry through a public meeting to address concerns with the NPRM and then to issue a supplemental NPRM that achieves the goals of SPD–2. The FAA is construing the contents of the letter as comments on the proposals in the NPRM.

[17] Section 431.43(d) sets a limit for foreseeable public consequences in terms of CE_C, but only for an unproven RLV. Section 431.43(d) provides an unproven RLV may only be operated so that during any portion of flight, the expected number of casualties does not exceed 1×10^{-4} given a vehicle failure will occur at any time the instantaneous impact point is over a populated area. This is in greater detail in the high consequence event protection section of the preamble.

as the measure of a high consequence event in § 450.101(c)(2). Section 450.101(c) is discussed more fully later in this preamble.

Virgin Galactic commented that ELOS determinations should be part of the license application process. The FAA agrees with the comment and incorporates ELOS determinations into the license application process. To exercise this option, an applicant must demonstrate, through technical rationale, that the proposed alternative provides a level of safety equivalent to the requirement it would replace. The FAA will evaluate the proposal during the application evaluation.

CSF stated that, if the FAA adopted the parts 431 and 435 framework, ELOS would be unnecessary because the ELOS process does not exist under those regulations.[18] Blue Origin urged the FAA to consider the need for an ELOS option in this rule.

In response to CSF's comments, the FAA acknowledges that, in theory, a performance-based regulation like part 450 could function without an ELOS provision, because, in concept, a performance-based rule allows many different means of compliance with the required safety standard. The FAA considered eliminating the ELOS provision from the final rule, but decided that eliminating the ELOS provision would remove a useful regulatory tool that provides flexibility. Unlike means of compliance, which demonstrate compliance with the regulation, ELOS allows an applicant to propose and demonstrate a method that ensures an ELOS to the requirement, but not necessarily compliance with the requirement itself. The FAA has chosen to retain the option of ELOS to allow operators to propose unique processes and procedures that this rule may not have contemplated.

Blue Origin stated that it supports the use of safety cases as a means to establish an ELOS under proposed § 450.37. A safety case is a structured argument, supported by a body of evidence that provides a compelling, comprehensive, and valid case that a system is safe, for a given application in a particular setting. Regarding process, Blue Origin recommended requiring only one layer of external-to-applicant audit, and that the audit criteria be transparently developed with industry input to ensure understanding of the scope of compliance with the ELOS proposal process. Another individual commenter stated that the FAA should add a provision that would allow use of an alternate process for obtaining a license based on the use of a ''safety case'' methodology. This methodology would consist of voluntary audits of an applicant's safety and risk management program, followed by development of a safety case showing how the public would be protected during licensed activities.

The FAA finds that the proposed regulation is flexible in allowing an applicant to propose a means of compliance. It also affords the possibility of meeting most requirements by demonstrating an ELOS.[19] An applicant may wish to use a safety case to demonstrate that it is has satisfied the ELOS standard; however, the FAA declines to add prescriptive audit requirements for its use. An applicant could, but is not required to, use a safety case to show that a certain method satisfies an ELOS to a regulatory requirement, excluding the requirements of § 450.101(a), (b), (c)(1), (c)(3), (d), (e)(1), and (g). A safety case is not required to demonstrate ELOS. It is one way to provide rationale for ELOS. An applicant could use a safety case or other justification for ELOS.

Virgin Galactic recommended that safety cases be counted as an alternative to CE_C in § 450.101(c). The Boeing Company (Boeing), Lockheed Martin Corporation (Lockheed Martin), Northrop Grumman Corporation (Northrop Grumman), and United Launch Alliance (ULA) sought clarification as to why § 450.37 would not apply to § 450.101. Similarly, Blue Origin, CSF, SpaceX, and Virgin Galactic commented that ELOS should be allowed for § 450.101(c).

The FAA agrees with allowing ELOS for § 450.101(c)(2). This allows an operator to make a safety case or provide some other justification for an ELOS determination for an alternative method to protect against a high consequence event, such as safeguards other than flight abort, or an alternative to CE_C as a measurement of the potential for a high consequence event, such as a risk profile, both of which are described more in the preamble section discussing § 450.101(c). Section 450.101(a), (b), (c)(1), (c)(3), (d), (e)(1), and (g) contain the core safety requirements to protect people and property on land, at sea, in the air, and in space. Any proposed non-compliance with these risk requirements will require a waiver and are not eligible for a demonstration of ELOS. By contrast, all other flight safety requirements in part 450 subpart C, which can be demonstrated through ELOS, support the achievement of these underlying risk criteria. To use an ELOS, an operator may demonstrate that an alternative approach provides an equivalent level of safety to a requirement in accordance with § 450.37. A petition for waiver must be submitted at least 60 days in advance and address why granting the request for relief is in the public interest and will not jeopardize the public health and safety, safety of property, and national security and foreign policy interests of the United States in accordance with § 404.5.

Boeing, Lockheed Martin, Northrop Grumman, and ULA commented that the FAA should accept a Federal launch or reentry site's safety processes as providing an ELOS to the FAA's own safety standards without any additional safety requirements.

The FAA disagrees. FAA regulations apply to licensed launches and, in accordance with § 450.45(b) (Safety Review and Approval), the FAA will accept any safety-related launch or reentry service provided by a Federal launch or reentry site or other Federal entity by contract, if the FAA determines that the launch or reentry service satisfies part 450. Although it is possible for the FAA to find that a service provided by a Federal launch or reentry site does not satisfy a requirement in part 450 but does provide an ELOS, the FAA needs to make that determination on a case-by-case basis.

iii. ''As agreed to by the Administrator''

Throughout the NPRM, the FAA used the clause ''as agreed to by the Administrator.'' The term was used in all time frame requirements, as well as in proposed §§ 450.3(a) and (b)(1), 450.33, 450.101(c), 450.113(a)(5), 450.107(b)(2), 450.107(d), 450.147(c), 450.173(g), 450.213(a), and 450.215(b). As stated in the proposal, this clause is used to mean that an operator may submit an alternative to the proposed requirement to the FAA for review. The FAA must agree to the operator's proposal for the operator to use the alternative.

CSF and SpaceX commented that it was unclear how the clause ''as agreed to by the Administrator'' differed from an ELOS determination. CSF and SpaceX requested that the FAA describe its expectations and capture any process associated with this option in guidance. CSF and SpaceX also recommended adding ''unless otherwise agreed to by the Administrator'' to the beginning of proposed § 450.101(c).

[18] The FAA added equivalent level of safety provisions to parts 431 and 435 in a 2018 final rule. 83 FR 28528 (June 20, 2018).

[19] ELOS is not applicable to § 450.101(a), (b), (c)(1), (c)(3), (d), (e)(1), and (g).

The clause ''as agreed to by the Administrator'' means that an operator may submit an alternative to a regulatory requirement. The FAA must agree to the operator's proposal for the operator to use this alternative. Unlike an ELOS determination, an applicant need not demonstrate that this alternative satisfies an ELOS to the requirement. Each use of the term ''as agreed to by the Administrator'' includes criteria or considerations by which the FAA will agree to a different approach than the regulatory requirement. An applicant should look to these criteria or considerations to determine what the FAA would expect from an applicant when providing an alternative proposal.

For most of the requirements in part 450, an applicant may demonstrate an equivalent level of safety if the applicant is unable to meet a requirement. In addition, an operator may request a waiver to any requirement. An ELOS may be submitted in a license application and must clearly and convincingly demonstrate that an alternative approach provides an equivalent level of safety to the requirement. A petition for waiver must be submitted 60 days in advance and address why granting the request for relief is in the public interest and will not jeopardize the public health and safety, safety of property, and national security and foreign policy interests of the United States.

For some requirements, the FAA anticipated the need for additional regulatory flexibility without the burden of providing an equivalent level of safety or applying for a separate waiver. For those requirements, the FAA has incorporated the clause ''as agreed to by the Administrator'' to mean that an operator may submit an alternative to the proposed requirement to the FAA for review. For each requirement where the FAA has provided additional flexibility by including the ''as agreed to by the Administrator'' clause, the FAA has also provided criteria that the Administrator will consider in determining whether to approve the alternative approach, including safety considerations when appropriate. For example, an alternative time frame will generally be accepted if it provides sufficient time for the FAA to review the submittal. These alternatives will typically be agreed to in pre-application consultation.

The FAA addresses the recommendation from CSF and SpaceX by including ELOS in § 450.101(c)(2). The use of ELOS and ''agreed to by the Administrator'' for § 450.101(c) is discussed in more detail in the preamble section addressing CE_C.

iv. Time frames

In the NPRM, the FAA proposed to allow an operator to propose different time frames for certain regulatory sections if ''agreed to by the Administrator''. Blue Origin, CSF, and SpaceX disagreed with this approach and requested that the FAA remove any requirement to submit such a request in a specific time frame other than as soon as the operator understands that a different time frame is necessary. Virgin Galactic recommended that alternate time frames should be spelled out within an operator's license application documents and suggested alternative regulatory text.

The FAA disagrees with the approach to remove specific time frames because the time frames are designed to ensure the FAA has sufficient time to conduct its review and make the requisite public health and safety, safety of property, and national security and foreign policy findings. The FAA notes that the time frames proposed in the NPRM and adopted in the final rule are default time frames. An applicant can propose and the FAA can accept an alternative time frame. The FAA expects alternative time frames to be proposed and accepted during pre-application consultation or during the application process so that the agreed to time frames are then reflected in the license once issued. Time frames can be adjusted after a license is issued through the license modification process, as opposed to the waiver process under the current regulations. However, in most cases, the FAA expects flexible time frames to be negotiated for all the launches or reentries under the license prior to the first licensed activity.

v. Level of Rigor Based on Experience

An individual commenter stated startup launch operators should not operate under the same regimen as experienced operators. This individual stated that startup operators should be subject to strict and precise regulations. Similarly, another individual expressed concern that the proposed rule would apply performance-based requirements to launch vehicles with no prior launch history. SpinLaunch, Inc. (SpinLaunch) commented that the correct regulatory framework should consist of an applicant's demonstrating the necessary skills and knowledge to perform safe and accepted operations.

The FAA disagrees that startup launch operators should operate under a different regulatory regime than experienced operators, and that performance-based requirements should not apply to launch vehicles with no prior launch history. Performance-based requirements provide flexibility to all operators. Means of compliance located in ACs and other standards that have been identified as accepted means of compliance to part 450 provide detailed guidance to those new operators that have not yet established safety processes and procedures. In response to SpinLaunch's comment, the final rule is structured such that an applicant must demonstrate to the FAA the necessary skills and knowledge to perform safe operations in its launch or reentry license application.

2. Part 450 Subpart A—General Discussion

a. Pre-Application Consultation

In the NPRM, the FAA proposed to retain the requirement for pre-application consultation from § 413.5 (Pre-Application Consultation) because the various flexibilities proposed in this rule would benefit from pre-application discussions. These include incremental review, timelines, and the performance-based nature of the regulatory requirements. In the final rule, the FAA adopts the proposal with no changes to the existing pre-application consultation provision.

As proposed, this rule retains pre-application consultation for vehicle operators seeking a license. The FAA will also publish a pre-application consultation Advisory Circular, which will provide additional guidance but will not establish new regulatory requirements. Pre-application consultation will continue to focus on compliance planning and ensuring the applicant can prepare an acceptable application, which will increase the efficiency of the licensing process. The length of pre-application consultation will vary based on the proposed operation. For example, pre-application consultations may be longer when involving new launch vehicles that are under development or with operators inexperienced with FAA's regulations. Alternatively, pre-application consultations with operators who demonstrate knowledge of FAA regulations and/or use proven vehicles from established sites should be considerably shorter. The FAA expects to discuss the following topics with an applicant during pre-application consultation, to the extent they are relevant to the applicant's proposed operation: Entrance and exit criteria for pre-application consultation, the intended means of compliance to meet the regulatory requirements in part 450,

the scope of the license, safety element approvals, incremental review, review period for license evaluation, compliance expectations, and time frames an operator is required to meet to satisfy part 450. Some of the topics allow for flexibility that can result in a more efficient licensing process for both the applicant and the FAA.

The FAA will continue to consider the following factors to determine if a prospective applicant is ready to begin pre-application consultation: Whether the concept of operations is realistic and whether the prospective applicant is able to provide a program schedule that includes definition of significant milestones and a funding source or sources. The regulatory requirements for a launch and reentry license are the same for all applicants; however, FAA expects it will take longer for less experienced operators to meet all of the requirements. As currently required, to exit pre-application consultation and begin the license evaluation period, an application must be complete enough in accordance with § 413.11 (Acceptance of an application). A complete enough application must include enough information for the FAA to start its review. The FAA will screen an application in its entirety or in modules to determine whether it is complete enough for the FAA to start its review. The components of a vehicle operator license application are listed in § 450.31 (General) and include a policy review, a payload review, a safety review that complies with Subpart C, an environmental review, and information necessary to satisfy the maximum probable loss analysis required by part 440.

For the five sections listed in § 450.35(a), an applicant must use a means of compliance that has been accepted by the Administrator prior to application acceptance. An applicant may propose another standard or a unique means of compliance for these five sections before submitting its application.[20] Furthermore, many requirements throughout the final rule allow an operator to use an alternative method if that method has been agreed to by the Administrator. This allowance maximizes flexibility and will reduce the need for the applicant and the FAA to use process waivers. During pre-application consultation, the FAA anticipates that applicants will discuss the means of compliance they plan to use for the remaining sections of the rule, and any alternative means they plan to use for those sections that allow alternative means of compliance. While the FAA anticipates that this pre-application consultation will expedite license review times and aid both FAA and applicant, it is only required for the sections listed in § 450.35(a).

The final rule has built-in flexibilities for determining the beginning and end of launch such that the launch is scoped to an individual operator's unique circumstances. It is important that the applicant and the FAA come to a mutual understanding during pre-application consultation about the beginning and end of launch for the license. The beginning and end points of a launch operation define the extent of a number of requirements, including, but not limited to, indemnification and FAA oversight. Therefore, an applicant should define the beginning and end of its operation during pre-application consultation, and should coordinate with the FAA before finalizing and submitting its application.[21] In this way, the applicant can ensure that the FAA will evaluate the complete scope of its proposed operation.

If an applicant is planning to seek a safety element approval, the applicant must continue to consult with the FAA before submitting its application in accordance with § 414.9 (Pre-Application Consultation). Doing so will help ensure that the FAA and the applicant have a thorough understanding of how the applicant will comply with the regulatory requirements surrounding a safety element approval before submitting an application. During pre-application consultation, the FAA would expect an applicant to be able to discuss, at a minimum, the following information as outlined in § 414.15: (1) How the applicant will meet the applicable requirements of part 450; (2) the information required in § 414.13(b)(3), (c)(2), and (c)(3); and (3) the sections of the license application that support the application for a safety element approval.

If an applicant is proposing an incremental review of its application, the applicant must have its approach approved by the FAA prior to submitting its application, in accordance with § 450.33 (Incremental Review and Determinations). Incremental review is intended primarily to give additional flexibility to the applicant, by allowing the applicant to separate the safety review into sections so that those sections can be approved independently. In many ways, the incremental review process is similar to the independent payload review or a safety element approval process because it allows the applicant to comply with the safety approval portion of the regulation in modules or sections rather than all at once. An applicant considering the use of the incremental review process should indicate to the FAA during pre-application consultation which portions of its application will be evaluated under the incremental review process. See the Incremental Review section of this preamble for further discussion.

Finally, part 450 allows an operator to propose alternative time frames for certain requirements, which are listed in Appendix A to part 404. If an operator knows in advance of application submittal that it will propose an alternative time frame, the applicant should raise this proposal during pre-application consultation. The FAA would also be able to discuss during pre-application consultation the FAA's expected review period to make its determination on the proposed alternative time frame. Flexible time frames are discussed at length later in this preamble.

The FAA received several comments on the pre-application consultation process. An individual commenter stated that pre-application consultation may not provide substantial benefits for an existing program and suggested allowing the FAA to request a pre-application consultation process with a 30-day completion timeline for any ''material changes'' to existing programs deemed as posing a significant risk to the safety of the vehicle. The commenter also suggested the FAA could request this process at least 60 days before the integration of the launch vehicle. The commenter stated that past performance of space flights and aircraft should be taken into consideration for the level of rigor for the pre-application process.

The FAA will not attach a schedule to pre-application consultation but agrees with the commenter that a material change can be discussed as part of pre-application consultation. The FAA acknowledges that pre-application consultation should be minimal for experienced operators using proven vehicles from established sites. This type of abbreviated consultation period for experienced operators would be consistent with the pre-application process prior to issuance of this final rule. The FAA disagrees with a 30-day completion timeline for pre-application consultation for any material change to existing programs. The FAA also disagrees with the suggestion that the

[20] Further discussion on this topic is in the preamble section for performance-based regulations and means of compliance.

[21] A discussion on what constitutes beginning and end of launch is in the preamble section discussing scope of launch.

FAA request pre-application consultation at least 60 days before integration of the launch vehicle or that pre-application consultation be tied to the flight safety risk of the vehicle. These timelines and criteria may be inadequate in some cases to prepare a complete application properly; in others, they might result in unnecessary delays in addressing and implementing critical safety changes. In addition, the FAA will not tie pre-application consultation to risk to the vehicle because the FAA does not oversee risk to the vehicle but rather risk to the public.

Sierra Nevada noted that operators could work with the FAA to develop a program schedule and define anticipated data submissions during pre-application consultation. Sierra Nevada noted that this use of the consultation process was not specifically codified in the proposed regulations and recommended including it expressly in an AC.

The FAA agrees and will include guidance on application scheduling and data submissions in the pre-application consultation AC. The FAA considered including more robust requirements for pre-application consultation in the final rule, however, the FAA concluded that the current regulation both prepares the applicant to submit a complete application and the FAA to accept it, while also providing flexibility to the applicant to approach pre-application consultation in a manner that best fits the proposed operation.

b. Application Process

In the NPRM, the FAA proposed to clarify in § 413.1 (Scope of this Part) that the term ''application'' means either an application in its entirety or a portion of an application for incremental review. In § 413.21 (Denial of a License or Permit Application), the FAA proposed to remove ''license'' from paragraph (c) so the regulation applied to both license and permit applications. In part 414 (Safety Element Approvals), the FAA proposed to change the term ''sufficiently complete'' to ''complete enough,'' as used in § 413.11 (Acceptance of an Application), because the two terms both described the point at which the FAA determined it had sufficient information to accept an application and begin its evaluation. Finally, the FAA proposed to amend § 413.7 (Application Submission) paragraph (a)(3) to allow an applicant the option to submit its application by email as a link to a secure server and remove the requirement that an application be in a format that cannot be altered. In the final rule, the FAA adopts these changes as proposed.

A joint set of comments submitted by Boeing, Lockheed Martin, Northrop Grumman, and ULA expressed support for the proposal to allow the submission of an application using physical electronic storage.

In addition, the FAA received suggested changes to the generic application process. The American Association of Airport Executives (AAAE) and the Denver International Airport commented on the need for further engagement with stakeholders during an operator's application process. These commenters said the FAA should provide an opportunity for affected stakeholders to provide input on an operator's application regarding issues such as impacts to the National Airspace System (NAS). Denver International Airport stated that stakeholders should be able to submit comments on license applications.

The FAA does not agree that an application should be open to a public input process. The FAA issues a license based on whether the applicant's proposal will not jeopardize public health and safety, the safety of property, and the national security and foreign policy interests of the United States. The FAA coordinates with government or private entities as necessary to make this determination. A broad public input process outside the environmental review process is unnecessary for the FAA to make its licensing determination. While commenters may seek the opportunity to raise issues such as non-safety impacts to the NAS or the economic impact to land adjacent to a launch, the FAA cannot consider such issues in the licensing determination.

The NPRM specifically sought comments on how the FAA could standardize and better implement the ''complete enough'' application standard. Sierra Nevada inquired whether the FAA will still conduct a complete enough review. Sierra Nevada concurred with the FAA's approach in conducting complete enough reviews but commented that the FAA should specify a timeline for these reviews. SpaceX commented that the FAA should aim to conduct its complete enough review within ten days of receipt of submission and apply that standard to submissions for continuing accuracy, renewals, and modifications. Furthermore, Sierra Nevada asserted that the review should be included in the FAA's statutory 180-day review period or a new, defined timeline. CSF and SpaceX recommended that the complete enough standard in current § 413.11 be expanded to apply to any application submission, including the initial license application, continuing accuracy submissions, and modification submissions. CSF and SpaceX suggested regulatory text changes to § 413.11 to this end. Both commenters also requested the FAA issue an AC that that explains how the agency makes the complete enough determination, including a checklist comprising regulatory sections that require submissions. Virgin Galactic recommended that what constitutes ''complete enough'' be agreed upon by both the applicant and the FAA during the pre-application consultation phase and provided several changes to the regulatory text.

The FAA will continue to use the complete enough standard to determine whether a license is sufficiently complete to begin review. The FAA endeavors to make these determinations within 14 calendar days of receiving an application. Limiting the FAA to ten days, as suggested by SpaceX, may not provide adequate time for review. The FAA begins the calculation of the 180-day statutory review period on the date that it receives the information needed to make the application complete enough, regardless of how long it takes to make that determination. The FAA does not base this calculation on the date it determines that the application is complete enough. The complete enough standard applies to any submission, including those for license modifications for consistency. The FAA has applied this standard to submissions for license modifications and, when necessary, requested additional information and clarifications to allow it to proceed with its evaluation. Section 450.211(c) states that an application to modify a license must be prepared and submitted in accordance with part 413. Therefore, § 413.11 is applicable to an initial license application submission and license modification submissions and does not need to be modified to apply to any application submission. The FAA will work closely with applicants on a case-by-case basis to determine what changes may be made without invalidating the license. In accordance with § 450.211(c), the licensee must apply to the FAA for modification of the license once a license has been issued, except for the allowable changes identified by the FAA. An operator may propose an alternate method from part 413 to request a license modification. This alternate method could include an agreed-upon submittal schedule and FAA review period.

It should be noted that § 450.211 (Continuing Accuracy of License

Application; Application for Modification of License) also covers license modification submissions related to continuing accuracy. The FAA will provide an AC that includes application checklists that an applicant can choose to use to help guide application submittal. However, additional information may be needed depending on the type of operation.

In response to Virgin Galactic's comments, the FAA agrees that dialogue as to what constitutes ''complete enough'' can be part of the pre-application consultation, but disagrees that any change in the regulatory text is required. One of the primary purposes of pre-application consultation is to provide the applicant guidance in preparing its license application. Although the FAA determines when an application is complete enough to begin its review, the FAA expects to develop collaboratively agreed upon criteria with an applicant for determining ''complete enough'' during pre-application consultation. By allowing applicants and the FAA to negotiate criteria for ''complete-enough'' during pre-application, the FAA anticipates applicants will be able to more predictably track their progress toward completing the application.

CSF and SpaceX also suggested that the FAA provide a substantive response to submittals within 30 days of receiving the application. CSF also suggested the FAA provide status updates to an applicant every two weeks.

The FAA already typically provides written response to submittals within 30 days, often much sooner. In some instances, however, the FAA requires more than 30 days to draft a response, especially for highly technical analyses. The FAA also provides a substantive response to an applicant in writing whenever additional information is required and, therefore, does not see a compelling rationale for a requirement to provide status updates on a predetermined schedule. However, FAA recognizes the concerns expressed by operators regarding extended delays between communications in certain circumstances. While the FAA does not believe establishing a specific time period for communication to applicants is a necessary component of its regulatory framework, it also recognizes the need for applicants to stay informed and anticipates communicating with applicants throughout the application process, including procedural changes to ensure applicants will be provided a status update within 14 days of receipt of an application.

c. Compliance Period for Legacy Licenses (§ 450.1(b))

In the NPRM, under proposed § 450.1(b) and subject to two exceptions, the FAA would permit an operator to conduct a launch or reentry pursuant to a license issued by the FAA under parts 415,[22] 431, and 435 before the effective date of the new part 450 or an application accepted by the FAA before the effective date of part 450. Even though the operator could continue to conduct operations under the regulations in effect at the time of license or application as referenced above, the proposed requirements under §§ 450.169 for collision avoidance analysis (COLA) and 450.101(a)(4) and (b)(4) for critical asset protection would apply to all operators subject to the FAA's authority under 51 U.S.C. chapter 509 conducting launches after the effective date of the new regulations. The FAA would determine the applicability of part 450 to an application for a license modification submitted after the effective date of the part on a case-by-case basis based on the extent and complexity of the modification, whether the applicant proposes to modify multiple parts of the application, or if the application requires significant reevaluation.

The FAA adopts § 450.1 (Applicability) with revisions. The FAA does not adopt § 450.1(b) as proposed in the NPRM. While the FAA adopts the concept as proposed in § 450.1(b) in parts 415, 417, 431, and 435, it also makes corresponding changes to §§ 413.23 and 415.3 to limit the duration of all licenses issued or renewed to no more than five years after the effective date of part 450. The FAA refers to these licenses as ''legacy licenses'' throughout this preamble. After that time, all operators must come into compliance with the new regulations. In the final rule, the FAA makes numerous revisions to certain regulations that apply to operators conducting operations under parts 415, 417, 431, and 435. These revisions include amending § 401.5 title to read ''Definitions as Applied to Parts 415, 417, 431, 435,'' adding new § 401.7 for definitions, updating § 413.1, and amending parts 415, 417, 431, 435, 440, and 460 to reference compliance with part 450.

The FAA notes that certain definitions in § 401.5 apply to parts 415, 417, 431, and 435. Therefore, because the FAA will allow operators that hold an approved license at the time this rule goes into effect, or an accepted license application within 90 days after the effective date of the final rule, to operate under parts 415, 417, 431, and 435 for up to five years, this rule preserves § 401.5 without change. Section 401.5 will be removed five years after the effective date of the final rule.

The FAA adds § 401.7, which contains the definitions that apply to Chapter III other than parts 415, 417, 431, and 435, and which broadly captures those changes proposed in § 401.5 in the NPRM. The FAA notes that parts 415, 417, 431, and 435 and § 401.5 will be removed five years after the effective date of the final rule.

Part 413 explains how to apply for a license or experimental permit. In the final rule, the FAA amends the table in § 413.1(b) to identify that the requirements in parts 415, 417, 431, and 435 apply only to applicants whose launch or reentry license has been approved or license application has been accepted by the FAA no later than 90 days after the effective date of the final rule. As previously mentioned, operators holding an approved launch or reentry license, or who have an accepted launch or reentry license application may choose to continue to operate under parts 415 and 417, part 431, and part 435, until five years after the effective date of this rule. The FAA also adds ''Launch and Reentry License Requirements'' as a subject in the table in § 413.1(b). Finally, the FAA adopts the provision that the FAA may grant a request to renew a license issued under parts 415, 417, 431 or with a non-standard duration in proposed § 450.1(b) and re-designates it as § 413.23(a)(2) in the final rule. Specifically, the FAA may grant a request to renew a under parts 415, 431, and 435 with a non-standard duration so as not to exceed five years after the effective date of this rulemaking. The FAA adds an applicability section to parts 415, 431, and 435. These parts apply to such licenses issued before the effective date of the final rule and licenses issued on or after the effective date of the final rule if the FAA accepted the application under § 413.11 no later than 90 days after the effective date. All operators must comply with the COLA and critical asset protection requirements in part 450.

In the final rule, the FAA adds the phrase ''pursuant to a license issued under part 415 of this chapter'' to the scope in § 417.1(a). The FAA also removes § 417.1(e), which addresses grandfathering that is no longer used from when part 417 was first established. For the same reason, the FAA also removes the grandfathering

[22] The FAA notes that an operator operating under a license issued under part 415 would also be subject to the requirements of part 417.

reference to paragraph (e) in § 417.1(f). As a result of this amendment, the FAA re-designates § 417.1(f) and (g) as § 417.1(e) and (f) in the final rule.

The FAA further revises §§ 417.11 and 431.73 in the final rule. The FAA adds a paragraph stating that the Administrator may determine that a modification to a license issued under these parts must comply with the requirements in part 450. The Administrator will base the determination on the extent and complexity of the modification, whether the applicant proposes to modify multiple parts of the application, or if the application requires significant evaluation.

The FAA revises § 440.3, which addresses definitions. In the final rule, § 440.3 references the definitions contained in §§ 401.5 and 401.7. The reference to § 401.5 will be removed from § 440.3 five years after the effective date of the final rule.

Finally, the FAA revises § 460.45 to identify which mishap definitions an operator should apply in the description of the safety record of the vehicle to each space flight participant. Specifically, § 460.45(d)(1) addresses licenses issued under part 450. For these licenses, the operator's safety record must cover events that meet paragraphs (1), (4), (5), and (8) of the definition of a ''mishap'' in § 401.7 that occurred during and after vehicle verification performed in accordance with § 460.17. Section 460.45(d)(2) addresses licenses issued under parts 415, 431, or 435. For these licenses, the operator's safety record must cover launch and reentry accidents and human space flight incidents as defined by § 401.5. Section 460.45(d)(1) will be re-designated to §§ 460.45(d) and 460.45(d)(2) will be removed from § 460.45 five years after the effective date of the final rule.

Several commenters asked for clarity on the FAA's approach in § 450.1(b) to legacy licenses issued under the current regulations. CSF objected to requiring renewals of licenses issued under the current regulations to meet the requirements of proposed part 450, as this would result in significant cost and regulatory burdens for the operator and the FAA.

As previously noted, the FAA does not adopt § 450.1(b) in the final rule. However, the FAA implements the concept as proposed in § 450.1(b) in parts 415, 417, 431, and 435. In the final rule, the FAA establishes a five-year period after the effective date of this rule. Operators holding either an active license or an accepted license application no later than 90 days after the effective date of this rule may operate under the applicable regulatory provisions upon which the licensing determination was made. In addition, these operators may submit requests for license renewals within that five-year period and will be required to comply with the regulations under which the license determination was made.[23] The FAA has revised §§ 413.23 and 415.3 to reflect that no license issued under parts 415, 431 or 435 will be renewed with an expiration date that extends beyond the five-year period. As such, applications for renewal submitted near the end of the five-year period will be valid only for a short time. All operators will need to comply with this rule in its entirety five years after its effective date.

CSF noted that operators under current parts 431 and 435 would need to come into compliance with the proposed part 450. Similarly, Virgin Galactic requested that FAA allow currently licensed operators to be grandfathered into part 450 for vehicles that cannot meet certain part 450 requirements as long as the current public safety requirements are met. Virgin Galactic stated that, unlike ELV operators, RLV operators use their vehicles repeatedly, and the FAA has not shown why it is necessary for current operators to undergo new analyses and possible design changes. Virgin Galactic noted that the FAA's aviation regulations allow for ''true'' grandfathering. Virgin Galactic commented that if the FAA chooses not to allow for ''true'' grandfathering, it should work with each licensee during pre-application consultation to determine applicability of the new rule to modifications to current licenses.

The FAA notes that as the final rule is more performance-based than the rule as proposed in the NPRM, many of the current requirements would serve as a means of compliance to meet the new regulations. The FAA anticipates that there would be few, if any, additional requirements that will not be fulfilled by previously submitted information. The FAA will not allow operating under parts 415, 417, 431, and 435 indefinitely because the current rule is more streamlined, performance-based, and up-to-date than the previous regulations. Therefore, the FAA will require all operators to come into compliance with the new rule five years after the effective date. The FAA will consult with existing licensees shortly after the final rule is published to assist operators with the transition to part 450 so they may take advantage of the significant number of new flexibilities.

CSF objected to the lack of clarity on grandfathering and recommended that the FAA make clear that a licensee approved under the current licensing regime may continue to renew its approvals, with no significant changes, without having to apply under part 450. License renewals without significant changes may continue to be renewed, but not to exceed the five-year compliance period.

Operators currently holding an active, valid license will have five years after the effective date of this rule to come into compliance with the entirety of part 450. If a license expires before the end of this period, an applicant may seek a renewal under the previous provisions in parts 415, 417, 431, and 435, but the renewal will only be valid for however much time remains between the time of issuance of the renewal and the end of the five-year period.

Virgin Galactic recommended the FAA hold a pre-application phase for all current license holders to ensure that licensees and the FAA are in agreement as to whether the FAA would require part 450 requirements or parts 415, 417, 431, and 435 requirements when an operator requests to modify a legacy license once part 450 becomes effective.

During the five-year compliance period, an operator may need to modify its legacy license. The provisions that relate to modification are contained in §§ 417.11 and 431.73. Whether or not new license modifications need to comply with part 450 is subject to Administrator approval on a case-by-case basis, which can be determined during consultation with the FAA before the applicant requests the modification. In making the determination as to whether a license modification is necessary to comply with the new requirements, the Administrator will consider the extent and complexity of the modification, whether the licensee would need to modify multiple parts of the application, or if the license requires significant reevaluation. The FAA encourages licensees to consult with the FAA on transitioning to part 450 in advance of the compliance period deadline.

d. Definition and Scope of Launch (§ 450.3)

In the NPRM, the FAA proposed to set the scope of activity authorized by a vehicle operator license by identifying the beginning and end of launch in

[23] As noted, all operators are also required to comply with the critical assets and COLA provisions of part 450 beginning from the effective date of this rule.

§ 450.3 (Scope of Vehicle Operator License).[24]

i. Beginning of Launch

In § 450.3(b)(1) and (b)(2), the FAA proposed that launch begins under a license with the start of hazardous activities that pose a threat to the public at a U.S. launch site. The proposed rule further stated that, unless agreed to by the Administrator, those hazardous pre-flight ground operations would commence when a launch vehicle or its major components arrive at a U.S. launch site. For a non-U.S. launch site, the FAA proposed that launch begins at ignition or first movement that initiates flight.

In the final rule, the FAA adopts proposed § 450.3(b)(1) and (b)(2) with revisions. First, the FAA does not adopt the proposed default that hazardous ground pre-flight operations commence when a launch vehicle or its major components arrive at a U.S. launch site. The final rule identifies certain activities that qualify as hazardous pre-flight operations, including but not limited to, pressurizing or loading of propellants into the vehicle or launch system, operations involving a fueled launch vehicle, the transfer of energy necessary to initiate flight, or any hazardous activity preparing the vehicle for flight. Second, this rule also clarifies that hazardous pre-flight operations do not include the period between the end of the previous launch and launch vehicle reuse when the vehicle is in a safe and dormant state. Finally, this rule adds language in § 450.3(a) that allows the Administrator to agree to a scope of license different from that laid out in § 450.3(b), as discussed later in this document. An applicant wishing to deviate from the scope of license parameters laid out in § 450.3(b) would discuss the deviation during pre-application consultation. The FAA would only allow a deviation for unique operations where the scope of license continued to cover those hazardous launch activities identified by statute.

CSF, SpaceX, and Virgin Galactic suggested proposed § 450.3(b)(1) be revised to remove reference to the arrival of major components at a U.S. launch site as beginning of launch. Virgin Galactic noted that the beginning of hazardous pre-flight ground operations should be determined only on a case-by-case basis and commented that the arrival of components at a launch site was an inappropriate prescriptive default limit chosen for administrative convenience. CSF, SpaceX, and Virgin Galactic also requested that the FAA limit the beginning of hazardous pre-flight operations only to include potential threats to the public over which no other Federal regulatory agency has jurisdiction.

The FAA agrees that the beginning of pre-flight ground operations should be determined on a case-by-case basis because each operation is unique. The FAA recognizes that with this flexibility comes some ambiguity as to when launch will begin for each unique operation. The designation of when launch begins is important for both operators and the FAA. Among other things, the financial responsibility protections apply from beginning to end of launch. Therefore, a clear understanding of when launch begins is essential for an operator to understand fully its responsibilities under chapter III and for the FAA to satisfy its obligations, including the calculation of maximum probable loss (MPL).

Because the proposed default beginning of launch, phrased as ''arrival of major components at a U.S. launch site,'' is removed from § 450.3(b)(1) in the final rule, an application requirement is added to § 450.3(d) to require an operator to identify the scope of the license being sought in the application, specifically pre- and post-flight ground operations. The final rule requires an applicant intending to launch from a U.S. launch site to identify pre- and post-flight ground operations such that the FAA is able to determine when the launch operation would begin and end. This requirement applies only to launches from a U.S. launch site, as launches from a non-U.S launch site begin at ignition or first movement that initiates flight. The FAA anticipates that an applicant would identify hazardous pre- and post-flight operations that are reasonably expected to pose a risk to the public. During pre-application consultation, the applicant is expected to describe to the FAA its launch site and its intended concept of operations leading up to a launch, including any operations that are potentially hazardous to the public. Once the FAA and the applicant have a clear, mutual understanding of the applicant's concept of operations, the FAA and the applicant will agree on a starting point for hazardous pre-flight operations, and thus, the beginning of launch. The applicant will provide that information in its application and scope its application materials based on this starting point. The scope of the license lends itself to the first module of an incremental review.

The FAA also agrees that the arrival of components at the launch site is an unnecessarily prescriptive baseline that may not constitute the threshold for hazardous pre-flight operations for all launches. Therefore, the FAA revises § 450.3(b)(1) to remove the reference to arrival of components at a launch site. Because the beginning of launch is an important designation upon which many licensee responsibilities rely, the FAA has added to the regulatory text certain activities that constitute hazardous pre-flight operations. The list of hazardous pre-flight operations added to the final regulatory text is derived from the preamble text in the NPRM explaining the proposal.[25] Hazardous pre-flight operations include, but are not limited to, pressurizing or loading of propellants into the vehicle or launch system, operations involving a fueled launch vehicle, the transfer of energy necessary to initiate flight, or any hazardous activity preparing the vehicle for flight. This list is not exhaustive, and during pre-application consultation the FAA or an applicant may identify an activity not included in this list that poses a hazard to the public and may constitute the beginning of launch. The FAA retains the ability to determine that licensed oversight is unnecessary for certain activities if the Administrator determines that they do not jeopardize public health and safety, safety of property, and the national security and foreign policy interests of the United States.

The FAA further amends § 450.3(b)(1) to indicate clearly that activities occurring between launches of reusable vehicles will not be considered hazardous pre-flight activities if the vehicle is in a safe and dormant state. Generally, a launch system is in a safe and dormant state when it is not undergoing the pressurizing or loading of propellants, a transfer of energy necessary to initiate flight, operations involving a fueled launch vehicle, or any other hazardous activity preparing the vehicle for flight. The NPRM preamble discussed the exemption of RLVs if a vehicle is in a safe and dormant state.[26]

One commenter suggested the definition of beginning of flight for hybrid vehicles be changed to include the first forward motion of the vehicle with the intent for takeoff.

The FAA agrees that the beginning of flight for a hybrid vehicle is the first forward motion of the vehicle with the

[24] The FAA proposed to move the beginning and end of launch and reentry language from the definition of ''launch'' in § 401.5 to proposed § 450.3.

[25] *See* 84 FR at 15361.

[26] *See* 84 FR at 15359.

intent to takeoff. However, the FAA will continue to use ''first movement that initiates flight'' to define beginning of the flight phase of launch because it better accommodates all vehicle types.

Regarding the FAA's jurisdiction over launch activities at a non-U.S. launch site, CSF stated that proposed § 450.3(b)(2) could be problematic for captive carry technologies for which an operator must comply with the oversight of foreign aviation authorities. CSF suggested removing reference to ''the first movement that initiates flight.''

The FAA does not adopt CSF's recommendation because the current regulation is flexible enough to accommodate all launch vehicle technologies at non-U.S. sites, as well as comprehensive enough to protect public safety. Starting launch at ignition will not capture the full flight of the captive carry hybrid vehicle system. The FAA regulates all of the components of a hybrid vehicle system, including any captive carry operations under a license; however, as discussed earlier, the flexibility in § 450.3(a) for the Administrator to adjust the scope of license applies to § 450.3(b)(2) as well. In the case of a unique operation for which hazardous activities begin later than first movement or ignition, the Administrator may agree to a different beginning of launch for that operation.

Virgin Galactic recommended that the FAA continue to avoid duplicating oversight and memorialize that commitment in its description of the beginning of launch as starting when hazardous pre-flight ground operations commence at a U.S. launch site that pose a threat to the public and over which no other Federal regulatory agency has jurisdiction.

The FAA has amended the regulation to address duplicative oversight at Federal launch or reentry sites in the final rule. These changes are discussed in the preamble section addressing launch and rentries from a Federal launch or reentry site. The FAA does not agree with the comment that launch under this chapter may only begin at a site over which no other Federal agency has jurisdiction. In fact, many sites, such as Federal sites or launch sites co-located at airports, may be subject to the jurisdiction of multiple Federal agencies depending on the types of activities that are conducted.

ii. End of Launch

In the NPRM, the FAA proposed to amend the definition of end of launch to remove reference to RLVs and ELVs. Although it did not receive comment on this proposal specifically, the FAA makes the following additional changes to the end of launch language: The addition of ''vehicle component'' and ''impact or landing'' throughout to ensure the definition captures a broader variety of operations; and the addition of ''deployment'' in § 450.3(b)(3) to include operations for which a payload remains on the vehicle. Under § 450.3(b)(3) and (c), the FAA replaces each use of ''vehicle stage'' in the proposed rule in recognition of the fact that components other than vehicle stages may return to Earth. Examples include a discarded engine or payload fairing. In addition, throughout § 450.3(b)(3) and (c), the FAA includes ''impact or landing'' in the end of launch and reentry sections in the scope of license requirements where the proposal only referred to one or the other or failed to reference either. With the increasing efforts to reuse components, including both impact and landing throughout § 450.3(b)(3) and (c) encompasses a broader range of activities because landing includes a soft vertical landing or runway landing of a vehicle or component, whereas impact is more accurate to describe a hard landing of a stage or component. Under § 450.3(b)(3)(ii), the FAA adds that, for an orbital launch of a vehicle with a reentry of the vehicle, launch may also end ''after vehicle component impact or landing on Earth, after activities necessary to return the vehicle or component to a safe condition on the ground after impact or landing.'' This additional language accommodates a carrier vehicle landing after the completion of the orbital part of the launch.

CSF, SpaceX, and Virgin Galactic expressed confusion regarding proposed § 450.3(b)(3), and requested clarity regarding proposed § 450.3(b)(3)(iv), including when reentry applies to suborbital vehicles and end of launch. The FAA introduced suborbital reentry in its experimental permit final rulemaking in 2007. In that rulemaking, the FAA stated that:

> A suborbital rocket may engage in reentry. For most suborbital launches, whether the flight entails a reentry will not matter from a regulatory perspective. The FAA will authorize the flight under a single license or permit, implementing safety requirements suitable to the safety issues involved. Recognizing suborbital reentry matters for two reasons. First, if a suborbital rocket is flown from a foreign country by a foreign entity into the United States, that entity may require a reentry license or permit from the FAA, depending on whether the planned trajectory of the rocket includes flight in outer space. Second, a permanent site that supports the landing of suborbital rockets may now be considered a reentry site depending, once again, on whether the planned trajectory reaches outer space.[27]

The NPRM did not propose any change to this framework, and no change is made in the final rule.

Virgin Galactic commented that the FAA should include specific parameters for suborbital reentry. Virgin Galactic also recommended additional regulatory language specifying that, for a suborbital reentry, reentry ends when each vehicle has returned to Earth and has been returned to a safe condition as defined in the operator's application documents. As noted earlier, a suborbital reentry requires flight into outer space.

This distinction does not change when launch ends for a suborbital vehicle because, whether a vehicle or vehicle component impacts or lands on Earth due to a launch or reentry, the launch or reentry would end at the same point in time; namely, after activities necessary to return the vehicle or vehicle component to a safe condition on the ground after landing. (See § 450.3(b)(3)(iv) and (c)).

CSF and SpaceX suggested that orbital launch without a reentry in proposed § 450.3(b)(3)(i) did not need to be separately defined by the regulation, stating that, regardless of the type of launch, something always returns: Boosters land or are disposed, upper stages are disposed. CSF and SpaceX further requested that the FAA not distinguish between orbital and suborbital vehicles for end of launch.

The FAA does not agree because the distinctions in § 450.3(b)(3)(i) and (ii) are necessary due to the FAA's limited authority on orbit. For a launch vehicle that will eventually return to Earth as a reentry vehicle, its on-orbit activities after deployment of its payload or payloads, or completion of the vehicle's first steady-state orbit if there is no payload, are not licensed by the FAA. In addition, the disposal of an upper stage is not a reentry under 51 U.S.C. Chapter 509, because the upper stage does not return to Earth substantially intact.

The FAA proposed in § 450.3(b)(3)(ii) that for an orbital launch of a vehicle with a reentry of the vehicle, launch ends after deployment of all payloads, upon completion of the vehicle's first steady-state orbit if there is no payload, after vehicle component impact or landing on Earth, after activities necessary to return the vehicle or component to a safe condition on the ground after impact or landing, or after activities necessary to return the site to a safe condition, whichever occurs later. The final rule changes ''if there is no payload'' to ''if there is no payload

[27] *See* 72 FR 17001, 17002.

deployment'' to clarify the FAA's intent on how to determine the end of launch for a vehicle carrying no payload or payloads that stay onboard a vehicle.

Both CSF and SpaceX proposed ''end of launch'' should be defined on a case-by-case basis in pre-application consultation and specified in the license. The FAA disagrees, in part. The FAA only regulates on a case-by-case basis if the nature of an activity makes it impossible for the FAA to promulgate rules of general applicability. This need has not arisen, as evidenced by decades of FAA oversight of end-of-launch activities. That said, because the commercial space transportation industry continues to innovate, § 450.3(a) gives the FAA the flexibility to adjust the scope of license, including end of launch, based on unique circumstances as agreed to by the Administrator. Unique circumstances may include, but are not limited to, unconventional technologies like railguns that may use innovative launch and reentry procedures requiring adjustments to a scope of license.

Finally, CSF pointed out that in the proposed rule, for hybrid vehicles, end of launch did not mention the recovery of carrier aircraft.

Section 450.3(b)(3) distinguishes orbital vehicles with and without a reentry, and suborbital vehicles with and without a reentry. A separate section for end of launch for hybrid vehicles is unnecessary because the same parameters apply to hybrids as apply to non-hybrid vehicles regarding end of launch. The FAA also acknowledges that the end-of-launch parameters do not mention the recovery of a carrier aircraft. Again, it is unnecessary to include this distinction because, during launch, a carrier aircraft is considered part of the launch vehicle.[28] Therefore, to the extent that § 450.3(b)(3) refers to activities necessary to return the vehicle or component to a safe condition on the ground after impact or landing, this reference will include returning the carrier aircraft to a safe condition after impact or landing.[29]

Blue Origin asked how the FAA plans to prevent disparate impacts of the proposed rule on those operators at multiuse facilities and at U.S. facilities. While the meaning of disparate impacts is unclear, the FAA construes the commenter as asking how the FAA will distinguish between launch and non-launch (*e.g.,* manufacturing or refurbishment of pre-flown stages) activities at a launch site. Because launch begins with the start of hazardous pre-flight ground operations that prepare a vehicle for flight, an operator may manufacture or refurbish launch vehicle components or perform certain other activities on a launch site without requiring an FAA authorization during the time after the end of the launch and before hazardous operations begin for the next launch. This treatment is consistent with existing practice prior to this rule: a vehicle operator could theoretically perform non-launch related activities on a launch site without needing a license as long as those activities are not in the scope of the license and do not pose a risk to public safety.

The Airline Pilots Association (ALPA) suggested the FAA define ''family of vehicles.''

The FAA does not define ''family of vehicles'' in this final rule because the industry continues to innovate and it would be premature to attempt to classify all types of vehicle families for the emerging and still-evolving commercial space industry. As discussed in the NPRM, launch operators often define ''family of vehicles'' themselves. Usually, the vehicles have similar base operational characteristics, but each member of the family may be capable of different performance characteristics.

AAAE and Denver International Airport believed that operating at a specific site should necessitate a separate and thorough review from the FAA, and that operators should not be able to receive one license covering multiple sites.

The FAA will perform a thorough and complete review of all sites where a vehicle is authorized to operate. An applicant will not be able to add another location to its license ''with a lesser review standard'' as described by the commenter. A licensee will have to meet all applicable regulations for all sites authorized in a license. Denver International Airport cited 49 U.S.C 50904(d) to argue the FAA lacked statutory authority to grant a vehicle operator permission to operate from multiple launch and/or reentry sites on a single license. The FAA believes Denver International Airport meant to cite 51 U.S.C. 50904(d), which states that the Secretary of Transportation (the ''Secretary'') shall ensure that only 1 license or permit is required from the DOT to conduct activities, including launch and reentry. The law does not prohibit the FAA from issuing a license that allows an operator to conduct an approved operation from various sites. Rather, section 50904(d) merely prevents the FAA from requiring multiple licenses for the same type of activity for which a license or permit is required under title 51 chapter 509.

e. Safety Element Approval (Part 414)

In the NPRM, the FAA proposed to change the part 414 term from ''safety approval'' to ''safety element approval'' to distinguish it from ''safety approval'' as used in parts 415, 431, 435, and 450. Also, the NPRM proposed to modify part 414 to streamline the process by enabling applicants to request a safety element approval in conjunction with a license application. The final rule adopts the changes as proposed.

Several commenters expressed general support for the FAA's proposed regulations regarding safety element approvals in part 414. Blue Origin concurred with the FAA's proposal and anticipated many benefits to an applicant's ability to submit a separate safety element approval. One individual commented that more extensive use of these approvals could increase operator flexibility and significantly simplify the licensing process for future launches.

Virgin Galactic recommended an operator that already holds a license be able to use previously submitted data to apply for a safety element approval. Virgin Galactic also noted that the language in the first sentence of proposed § 414.23 should be changed from ''safety approval'' to ''safety element approval'' to reflect the updated terminology.

The FAA agrees that an operator that already holds a license may use previously submitted data to apply for a safety element approval. Just as is the case with a license application or modification, an applicant can reference previously submitted data in its safety element approval application. The applicant will need to specify clearly what it is referencing and indicate the referenced material is still valid. In addition, the FAA has corrected ''safety approval'' to ''safety element approval'' in §§ 414.23 and 414.3.

An individual commenter suggested a new definition for safety element approvals for hybrid vehicles. The commenter suggested the definition include a reference to hybrid vehicle components that are critical to avoiding

[28] *See* Legal Interpretation to Pamela Meredith from Mark W. Bury, Assistant Chief Counsel for International Law, Legislation and Regulations (Sept. 26, 2013); available at *https://www.faa.gov/about/office_org/headquarters_offices/agc/practice_areas/regulations/interpretations/Data/interps/2013/Meredith-ZuckertScoutt&Rasenberger%20-%20(2013)%20Legal%20Interpretation.pdf.*

[29] *See* Legal Interpretation to Laura Montgomery from Lorelei Peter, Assistant Chief Counsel for Regulations (Dec. 10, 2019); available at *https://www.faa.gov/about/office_org/headquarters_offices/agc/practice_areas/regulations/interpretations/Data/interps/2019/Montgomery-Ground%20Based%20Space%20Matters%20-%202019%20Legal%20Interpretation.pdf.*

or mitigating hazards to the public, including vehicle characteristics.

The FAA does not agree that it should add a separate definition of ''safety element approvals'' specifically for hybrid vehicles. The definition of ''safety element approval'' is broad enough to encompass approvals for hybrid and non-hybrid vehicle systems. The definition already includes the phrase ''any identified component thereof,'' which includes a carrier vehicle. The FAA agrees that it is possible to craft a safety element approval for the types of hazard control strategies employed by hybrid vehicles. The FAA notes that the definition of a ''safety element'' includes launch vehicle, reentry vehicle, safety system, process, service, or any identified component thereof; or qualified and trained personnel performing a process or function related to licensed activities or vehicles. This definition would allow a hybrid operator to apply for a wide range of safety element approvals.

Regarding process, a joint set of comments submitted by Boeing, Lockheed Martin, Northrop Grumman, and ULA stated an operator should not be required to apply to the FAA to transfer a safety element approval under proposed § 414.33 when the transfer is due to a corporate transaction, reorganization, or restructure that does not affect the material content of the original application.

The FAA will apply the same standard for application, transfer, and issuance of a safety element approval as it does for a license. Name changes and internal corporate restructuring do not typically require a license transfer and therefore will not require a safety element approval transfer.

Microcosm, Inc. (Microcosm), inquired as to how the FAA will issue a safety element approval. The FAA will issue a safety element approval applied for concurrently with a part 450 license in accordance with part 414.

f. Vehicle Operator License—Issuance, Duration, Additional License Terms and Conditions, Transfer, and Rights Not Conferred (§§ 450.5 Through 450.13)

In the NPRM, the FAA proposed requirements addressing the issuance, duration, and transfer of a vehicle operator license in proposed §§ 450.5 (Issuance of a Vehicle Operator License), 450.7 (Duration of a Vehicle Operator License), and 450.11 (Transfer of a Vehicle Operator License), respectively. The FAA also proposed requirements addressing the addition and modification of licensing terms in proposed § 450.9 (Additional License Terms of Conditions). Finally, the FAA proposed requirements describing those rights that would not be conferred by a vehicle operator license in proposed § 450.13 (Rights Not Conferred by a Vehicle Operator License). The FAA proposed these rules to consolidate the requirements for different types of launch and reentry licenses in parts 415, 431, and 435 into a single vehicle operator license.

AIA and Sierra Nevada commented that the FAA should not be allowed to make modifications to the terms and conditions of a license except within a limited time frame and subject to specified procedures to ensure reasonable notice and due process to the vehicle operator. The FAA will not adopt this recommendation and retains the provision in § 450.9 that allows the FAA to modify a vehicle operator license at any time by modifying or adding license terms and conditions to ensure compliance with the Act and its implementing regulations. This provision was introduced in 1999 in 14 CFR 415.11 because the FAA recognized that a particular licensee's launch (or reentry) may present unique circumstances that were not covered by the license terms and conditions in place. Because such a modification would be based on unique circumstances, the FAA is unable to specify a timeline as requested by the commenter.

In the final rule, the FAA adopts these requirements as proposed and adds specificity to § 450.11 to indicate that either the holder of a vehicle operator license or the prospective transferee may request a vehicle operator license transfer, both the holder and prospective transferee must agree to the transfer, and the FAA will provide written notice of its determination to the person requesting the vehicle operator license transfer. These additions mirror the language used for the transfer of a safety element approval and reflect current practice.

The FAA did not receive any comments on these proposed requirements.

3. Part 450 Subpart B—Requirements To Obtain a Vehicle Operator License

a. Incremental Review and Determinations (§ 450.33)

In the NPRM, the FAA proposed to amend part 413 and to include provisions in part 450 to allow an applicant the option for an incremental review of all portions of its application. This proposal was in response to the ARC recommendations. Specifically, the FAA proposed to amend § 413.15 (Review Period) to provide that the time frame for any incremental review and determinations would be established with an applicant on a case-by-case basis during pre-application consultation. As stated in the NPRM, the FAA did not propose to reduce by regulation the statutory review period of 180 days.

In the final rule, the FAA provides clarification on the basis the Administrator would consider when approving an incremental approach.

In the NPRM, the FAA sought comment on how a formal incremental review process would account for the statutory 180-day review period when application increments or modules are likely to be submitted and reviewed at different times, other useful guidelines for applicants crafting incremental approaches, and any safety approval sections that would be appropriate for incremental review. The FAA did not receive any comments with feasible solutions on any of these topics.

Several commenters expressed support for the FAA's proposed incremental review process, stating that it would increase flexibility. Virgin Galactic supported the FAA's proposed approach to incremental review and commented that it aligned with many other approval processes in other divisions of the FAA.

Many commenters, including Leo Aerospace, Microcosm, Sierra Nevada, SpaceX, and Virgin Orbit asked about the duration of incremental review periods. Noting the FAA's statutory mandate to issue a license determination not later than 180 days after accepting an application, commenters inquired whether each module would be subject to this 180-day review period. Several commenters, including CSF and Sierra Nevada, stated they interpret the 180-day statutory requirement to mean that the sum total of all module reviews must not exceed 180 days. Commenters noted that if every module was subject to a 180-day review, the process would be very time-intensive.

Until the FAA has more experience with the incremental review process, the FAA will review each module in accordance with a schedule discussed with the prospective applicant during pre-application consultation. In developing the incremental review schedule, the FAA will consider the interdependence of parts of the evaluation and the sequence of their submissions. The FAA makes these criteria explicit in this rule in § 450.33 (Incremental Review and

Determinations) paragraphs (b)(1) and (b)(2).[30]

Review of any modules prior to submittal of an application in its entirety will not initiate or be bound by the statutory 180-day review period. Rather, an agreed upon review period will begin once the FAA has a complete enough application in its entirety. During pre-application consultation, an applicant seeking an incremental review may negotiate a time frame shorter than the statutory 180-day review period. As the FAA gains more experience with the incremental review process, it may develop guidance concerning expected timelines for various sequences of modular submissions.

Sierra Nevada commented that, if a module is denied, proposed § 413.21 (Denial of a License or Permit Application) should allow the FAA to extend the review period by up to 60 days to consider a revised application. The commenter noted it supports the FAA's practice of tolling the review period in the case of a deficient application as long as the applicant understands the deficiency and what must be submitted for the FAA to continue its review. Leo Aerospace inquired whether an application would be considered accepted after the incremental process is defined, or after the last step of the incremental process is completed, and asked how an operator would be notified if its safety review was accepted.

Sierra Nevada's interpretation of incremental review is incorrect because a module cannot be denied under § 413.21. If the FAA determines a module does not contain sufficient information, the FAA and the applicant will discuss amending the agreed upon incremental review schedule to allow time for the applicant to submit a revised module. An applicant will be notified in writing when its complete application has been accepted.

Sierra Nevada noted the primary concern with module time frames was the transparency of the FAA's license application process and the ability for operators to reduce operational risk associated with the various time frames. To that end, a number of commenters, including Sierra Nevada, Leo Aerospace, and SpaceX, requested the FAA provide an outline of acceptance and review timelines and example timelines for incremental applications. CSF and Sierra Nevada agreed with the FAA's proposal to establish the timeline for incremental submissions in the pre-application phase but suggested the FAA include in an AC its goal for maximum review time frames for particular modules. CSF and Sierra Nevada recommended the AC include the following time frames: 60 days for policy approval; 30 days for payload review; 60 days for safety approval; 5 days for environmental assessment; and 15 days for financial responsibility assessment. CSF and Sierra Nevada noted that the FAA's review of the environmental assessment should only take 5 days because the FAA has had insight into the contractor used to conduct the environmental assessment, and the FAA's review should therefore simply be a verification that the applicant has submitted the final product. CSF and Sierra Nevada acknowledged that the financial responsibility assessment could take longer than 15 days for methods other than obtaining insurance, but stated that this possibility could be mitigated by the FAA's providing guidance that addresses the type of information that a licensee would need to submit to satisfy FAA review under § 440.9(f).

Commenters suggested that time frames for incremental review should be based on the complexity of the review and that they should be shorter than the statutory limit for the review of a complete application. Specifically, Virgin Galactic commented time frames should be based on the complexity of the item being reviewed. Sierra Nevada recommended modules be subject to a shorter review time frame than full application reviews and to define that time frame in § 413.15. Sierra Nevada stated the FAA should consider a shorter timeline of 90 days for review of a license application in order to meet the direction in Space Policy Directive-2 to streamline the review process.

The FAA declines to incorporate the suggested time frame changes because they will not provide adequate time for the FAA to assess application materials for completeness in all situations and for all potential applications. The FAA agrees that modules will likely be reviewed faster than an entire application, and that review times will depend largely on complexity; however, at this point it is premature to define those time frames until FAA has more experience with incremental reviews. The FAA will not at this time adopt maximum time frames, because each evaluation is a unique review that must be adjusted to each operation. The FAA's evaluation of the safety implications of an application typically requires the most effort and time, usually far more than the 60 days suggested by the commenters. The MPL is derived from the safety analysis and cannot be completed independently of it. An environmental review must be completed before a license can be issued. Particularly for new operations, the environmental process can be lengthy, and the FAA advises applicants to begin it early, even before a license application is submitted. For example, an applicant must submit a completed environmental impact statement (EIS) prepared by the FAA (or an FAA-selected and managed consultant contractor), FAA-approved environmental assessment (EA), categorical exclusion determination, or written re-evaluation as part of its application materials. The 180-day statutory application review period is not intended to encompass the time needed for the applicant to develop the necessary application materials, including environmental documentation. Five days may not be enough time to evaluate an environmental document, such as a complex EA.

For conventional operations that do not pose substantial policy-related challenges, policy and payload reviews can be conducted in less time than the safety review. However, these reviews are often performed concurrently with the safety review so their completion typically does not reduce the overall time required to reach a license determination. As the FAA gains more experience with the incremental review process, it may elect to update guidance to reflect timelines that have consistently proven effective.

Submitting an application incrementally affords an applicant the approval of various systems and processes earlier than the current non-incremental review process. The FAA expects that the central value of an incremental approach is regulatory certainty for components of the application and flexibility for applicants rather than a reduction in overall review time. However, the FAA anticipates that a determination of an accepted application that utilizes safety element approvals or approved modules will be completed faster than a similar application that does not use safety element approvals or incremental review.

[30] These criteria derived from the discussion in the preamble to the NPRM on what an applicant should consider when proposing an incremental approach. In relevant part, the NPRM stated: ''1. Application increments submitted at different times should be not be dependent on other increments to the extent practicable. 2. Application increments should be submitted in a workable chronological order. In other words, an applicant should not submit an application increment before a separate application increment on which it is dependent. For example, the FAA would not expect to agree to review a risk analysis before reviewing a debris analysis or probability of failure analysis because the risk analysis is directly dependent on the other two analyses.'' 84 FR at 15366.

Sierra Nevada recommended that an AC should also address the type of information a licensee would need to submit for the FAA's financial responsibility review. The financial responsibility requirements contained in part 440 are beyond the scope of this rulemaking. However, the financial responsibility requirements are adequately addressed in Appendix A to Part 440—Information Requirements for Obtaining a Maximum Probable Loss Determination for Licensed or Permitted Activities. Virgin Galactic recommended the FAA take into account FAA AVS [31] Project Specific Certification Plans to inform the incremental review process in proposed part 414. The FAA will discuss project-specific information, including AVS documents, during pre-application consultation.

Virgin Galactic also inquired how the operator would be notified when the operator's safety review has been accepted or rejected. The FAA will inform an applicant in writing as to whether each module is accepted or rejected.

b. Means of Compliance (§ 450.35)

In the NPRM, the FAA proposed that an applicant would be required to use an accepted means of compliance for the following requirements: Highly reliable FSS, FSA methods, lightning flight commit criteria, and airborne toxic concentration and duration thresholds for both flight and ground hazards. For these requirements, the means of compliance would need to be accepted by the FAA prior to the submission of an application. For all other performance-based requirements, an applicant would be able to use a means of compliance proposed in an application.

While the final rule maintains that an applicant must use an accepted means of compliance in an application for specified requirements, the FAA has made amendments to the structure of the regulatory text to identify more clearly that the use of accepted means of compliance is an application requirement. This requirement is now specified in § 450.35(a) of the final rule.

As stated above, for those five sections now identified in § 450.35, an applicant must use a means of compliance in its application that has been reviewed and accepted by the Administrator. The FAA will not accept an application that uses a means of compliance that has not already been accepted by the Administrator for any of the five requirements listed in § 450.35. The five requirements listed in § 450.35 are essential to public safety and involve well-established and complex methodologies, thresholds, or practices. Because of the complex nature and public safety impact of these requirements, the FAA would be unable to review unique means of compliance for these five requirements during its application evaluation within its review time frame. Rather, an applicant could choose to use an accepted means of compliance in its evaluation, or could submit a unique means of compliance for review and acceptance prior to submitting its application. Unique means of compliance for the requirements identified in § 450.35 may require evaluation before they are accepted as demonstrating fidelity and safety, however this rule allows unique means of compliance for these sections to be submitted in advance of a license application in order to provide flexibility and enable innovative concepts. For all other sections of part 450, an applicant may propose in its application a means of compliance that has not been previously accepted by the Administrator, and the FAA will review the means of compliance as part of its application review process. It is worth noting that an applicant who uses means of compliance that have already been accepted by the FAA in its license application will likely experience a more expeditious license review and determination.

A means of compliance is one means, but not the only means, by which a requirement can be met and may be used to demonstrate compliance with any of the performance-based requirements. For all performance-based requirements other than those listed in § 450.35, an applicant may include a unique means of compliance in an application for the FAA to review during the application evaluation. In the NPRM docket,[32] the FAA included a table listing all publicly available means of compliance for each proposed performance-based requirement (the ''Means of Compliance Table'') in subpart C that the FAA has accepted to date. An applicant need not include the entirety of an accepted means of compliance standard in an application, but may instead reference the accepted means of compliance using identifying features such as title and date or version.

Several commenters interpreted the NPRM as only allowing the means of compliance listed in the Means of Compliance Table. Conversely, the CSF commented that applying means of compliance flexibility only to the regulations cited in the Means of Compliance Table would be too limited, and should be expanded. The CSF also requested that the FAA remove or correct the preamble text to reflect that any applicant can seek to add an accepted means of compliance to the Means of Compliance table. The CSF specifically mentioned that the FAA should allow flexible means of compliance to meet the conditional expected casualty calculation in proposed § 450.101(c). SpaceX also commented that the FAA should expand the scope of flexible means of compliance and specifically identified proposed § 450.101(c).

The FAA emphasizes that any requirement in part 450 can have one or more means of compliance. The Means of Compliance Table provides one way, but not the only way, to meet the requirements in part 450. The conditional expected casualty thresholds in proposed § 450.101(c) were intended as safety criteria to measure and protect against potential high consequence events. In the final rule, the FAA has clarified § 450.101(c) to allow alternative demonstrations of high consequence event mitigation. This change is discussed in detail later in the preamble. The FAA will review the submitted means of compliance to determine whether they satisfy the regulatory safety standard. These means of compliance may be government standards, industry consensus standards, or unique means of compliance developed by an individual applicant. For government standards or means of compliance developed by a consensus standards body, the FAA will provide public notice of those accepted means of compliance that it determines satisfy the corresponding regulatory requirement. The FAA will also review unique means of compliance developed by an individual applicant to determine whether they satisfy the regulatory requirement.

Once a means of compliance is accepted by the FAA, it may be used to demonstrate compliance with the corresponding regulatory requirement. An updated Means of Compliance Table will be placed on the docket once the final rule publishes. This updated table identifies the means of compliance accepted by the FAA at this time for the corresponding regulation. This table will be made available on the FAA website and updated as additional means of compliance are accepted by the FAA. Unique individual operator-developed means of compliance will not be included in the Means of Compliance Table to protect proprietary information,

[31] AVS is the FAA's Office of Aviation Safety.

[32] *See* FAA–2019–0229–0018.

unless the operator that developed the means of compliance requests that its means of compliance be included.

CSF requested that the FAA clarify that it would not require compliance with an untailored RCC 319 [33] in order to demonstrate reliability. Blue Origin commented that the preamble does not address accepted means of compliance as a standalone flexibility measure. CSF and SpaceX commented that the proposed rule risks being quickly outdated and could discourage innovation because it does not allow tailoring of the requirements.

This rule does not require compliance with an untailored RCC 319 in order to demonstrate reliability; however, at this time, RCC 319 is the only accepted means of compliance for flight abort with a highly reliable FSS under § 450.145. An applicant may propose a tailored version of any accepted means of compliance, including RCC 319. If an applicant wishes to tailor RCC 319, the applicant must propose its tailored means of compliance as a unique means of compliance in advance of its license application. An applicant may include any unique means of compliance as part of its license application, other than those sections identified in § 450.35(a) that require a means of compliance to be accepted prior to application submittal. An applicant may also propose a unique means of compliance to meet these requirements in advance of its license application.

An individual commenter recommended that the FAA allow tailoring and include a clause to attend United States Air Force (USAF) tailoring meetings as part of meeting parts 415 and 417 requirements. As noted earlier, the FAA does allow tailoring. Part 450 will not change the FAA's current practice of attending tailoring meetings.

Virgin Galactic also recommended that the current part 417 appendices and range analyses continue to satisfy the requirements in part 450, and that the FAA complete its Launch Site Safety Assessments (LSSAs) in order for operators to know which Federal launch or reentry site's analyses and processes the FAA would find acceptable as means of compliance. ULA commented that the rule should more clearly allow work performed by another Federal agency to meet FAA requirements.

The part 417 appendices that can be used as an accepted means of compliance to part 450 requirements are listed in the Means of Compliance Table in the docket. The FAA agrees that it needs to determine and communicate to the industry which Federal launch or reentry site analyses and processes satisfy part 450. As noted earlier, the FAA will accept any safety-related launch or reentry service provided by a Federal launch or reentry site or other Federal entity by contract, as long as the FAA determines that the launch or reentry service satisfies part 450.

The New Zealand Space Agency (NZSA) and Virgin Galactic asked what process and standards the Administrator would employ for accepting means of compliance. Virgin Galactic asked what accepted means of compliance would be and whether the Administrator would use means of compliance that have not been published. Virgin Galactic also stated that means of compliance would need to be published prior to any work being performed that would require the means of compliance. Northrup Grumman supported the publication of newly accepted means of compliance.

The FAA will provide public notice of each publicly available means of compliance that the Administrator has accepted by posting the acceptance on its website. This notification will communicate to the public and the industry that the FAA has accepted a means of compliance or any revision to an existing means of compliance. The FAA will not post unique means of compliance documents with proprietary information submitted by applicants, unless specifically authorized by the applicant. The applicant may wish to consider offering its unique means of compliance to a consensus standards body for inclusion as part of an industry-developed consensus standard. The final rule does not adopt proposed § 450.35(b), which stated that the FAA would provide public notice of each means of compliance that the Administrator has accepted. The FAA removes this requirement because it is not a licensing requirement.

Proposed § 450.35(c) is amended and renumbered as § 450.35(b). The provision is renumbered because the final rule removes the proposed § 450.35(b), as discussed previously. In the final rule, § 450.35(b) allows a person to submit a means of compliance to the FAA for review outside the licensing process. The means of compliance must be submitted in a form and manner acceptable to the Administrator. The proposed rule limited this provision to applicants, whereas the final rule would allow any person to request acceptance of a proposed means of compliance. This is because the FAA anticipates other people or entities other than applicants may wish to submit a proposed means of compliance, such as operators that plan to be applicants in the future, and voluntary consensus standards bodies. The FAA wants to enable this. Section 450.35(b) is limited to requests for acceptance of a proposed means of compliance outside a license application, because the license application process is already defined in parts 413 and 450. Lastly, the FAA changes the modifier in front of ''means of compliance'' from ''alternative'' to ''proposed.'' The term ''proposed'' is better suited to the types of means of compliance the FAA would expect from this provision.

The process the FAA employs to accept a means of compliance will be set forth in guidance. [34] When submitting a unique means of compliance, an applicant's proposal should identify the regulation that the proposed means of compliance will address and provide the rationale as to why it demonstrates compliance with the applicable regulation. When reviewing a unique means of compliance, the FAA will consider past engineering practices, the technical quality of the proposal to demonstrate compliance with the part 450 regulations, the safety risk of the proposal, best practice history, and consultations with technical specialists for additional guidance.

NZSA and Virgin Galactic asked how the FAA would protect an operator's proprietary information when publishing means of compliance. NZSA recommended that the FAA retain the ability to share, with consent of the applicant, information about the means of compliance used to issue a license that may include proprietary information.

As a general matter, the FAA does not share proprietary data with the public. The FAA will treat any proprietary data linked to a unique means of compliance in the same manner as it protects proprietary data that an applicant uses to support a license application.

An individual commenter suggested the development of a Space Safety Institute to develop industry consensus standards. A consensus standards body, any individual, or any organization would be able to submit means of compliance documentation to the FAA for consideration and potential acceptance. The FAA recommends that in developing standards, a voluntary

[33] The Range Commanders Council (RCC) addresses the common concerns and needs of operational ranges within the United States. It works with other government departments and agencies to establish various technical standards to assist range users. RCC 319 provides for the safety of people and missions during launch and flight operations.

[34] *See* AC 450.35–1, Means of Compliance.

consensus standards body consider the processes outlined in OMB Circular A–119.

c. Use of Safety Element Approval (§ 450.39)

In the NPRM, the FAA proposed § 450.39 (Use of Safety Element Approval) to allow an applicant to use any vehicle, safety system, process, service, or personnel for which the FAA has issued a safety element approval under part 414 without the FAA's reevaluation of that safety element during a license application evaluation to the extent its use is within its approved envelope. The proposed rule would also change the part 414 term from ''safety approval'' to ''safety element approval'' to distinguish it from ''safety approval'' as used in parts 415, 431, and 435, and proposed part 450, because these terms have different meanings.

In the final rule, the FAA replaces the word ''envelope'' with the word ''scope.'' ''Scope'' more accurately captures ''envelope, parameter, or situation'' as used in the definition of ''safety element approval.'' For consistency, the same change is made in § 437.21.

d. Policy Review (§ 450.41)

In the NPRM, the FAA proposed to remove the requirement that applications include, for the purpose of conducting a policy review, information related to the structural, pneumatic, propulsion, electrical, thermal, guidance, and avionics systems used in the launch vehicle and all propellants. Instead, in order for the FAA to conduct its policy review, the FAA proposed that an applicant identify the launch or reentry vehicle and its proposed flight profile and describe the vehicle by characteristics that include individual stages, its dimensions, type and amounts of all propellants, and maximum thrust. In the final rule, the FAA adopts § 450.41 (Policy Review and Approval) as proposed.

Boeing, Lockheed Martin, Northrop Grumman, Sierra Nevada, and ULA suggested the FAA change the word ''normal'' in proposed § 450.41(e)(4)(iv) to ''nominal'' to be consistent with industry vernacular.

The FAA disagrees with this suggestion because the FAA seeks a range of possible impact areas in this section, not a particular impact point inferred by the use of ''nominal.''

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended the FAA add to § 450.41(b)(3) the phrase ''but not limited to'' in order to allow the FAA to consult Federal agencies other than the National Aeronautics and Space Administration (NASA).

The FAA disagrees that the additional language is needed to clarify that the FAA may consult Federal agencies other than NASA pursuant to § 450.41(b)(3). The term ''include'' implies the phrase ''but not limited to.''

The FAA notes, consistent with current practice, that if a launch or reentry proposal would potentially jeopardize U.S. national security or foreign policy interests, or international obligations of the United States, the FAA may seek additional information from an applicant in support of interagency consultation to protect U.S. Government interests.

An individual commenter recommended the FAA require licensees to comply with the Committee on Space Research's planetary protection policy (COSPAR PPP) as a means of ensuring that commercial launches comply with the Outer Space Treaty and of resolving existing gaps in the statutory prohibition on obtrusive advertising in outer space.

The FAA acknowledges the commenter's concerns, but the scope of this rulemaking does not encompass COSPAR's PPP or the statutory prohibition on obtrusive advertising.

e. Payload Reviews (§ 450.43)

In the NPRM, the FAA proposed to consolidate payload review requirements, remove the requirement to identify the method of securing the payload on an RLV, add application requirements to assist the interagency review, such as the identification of approximate transit time to final orbit and any encryption, clarify the FAA's relationship with other Federal agencies for payload reviews, and modify the 60-day notification requirements currently found in §§ 415.55 and 431.53.

The FAA stated in the NPRM preamble that, while it would review all payloads to determine their effect on the safety of launch, the FAA will not make a determination on those aspects of payloads that are subject to regulation by the Federal Communications Commission (FCC) or the Department of Commerce or on payloads owned or operated by the U.S. Government. In addition, the proposed rule added informational requirements that would include the composition of the payload and any hosted payloads, anticipated life span of the payload in space, any planned disposal, and any encryption associated with data storage on the payload and transmissions to or from the payload. Finally, the NPRM proposed to preserve the ability of payload operators to request a payload review independent of a launch license application. The FAA sought comments on the approach of including more requirements for a payload review in the regulation in order to expedite payload review application processing, but received none.

In the final rule, the FAA adopts § 450.43 (Payload Review and Determination) with revisions. The FAA adds the term, ''if applicable,'' to §§ 450.31(a)(3) and 450.43(a) to clarify that a payload review is not always required. The FAA notes that all payloads include any hosted or secondary payloads.

The Commercial Smallsat Spectrum Management Association (CSSMA) suggested that the FAA adopt a sixty (60) day timeline for independent payload review. CSSMA found little incentive for a payload owner or operator to use the independent payload review process, absent a fixed timeline for such payload reviews. CSSMA also recommended language that would render § 413.21(a) (Denial of a License or Permit) applicable to independent payload reviews.

The FAA declines to revise § 413.21(a) as suggested because the payload review is a requirement to obtain a launch or reentry license under part 450. The FAA notes that a favorable payload determination does not itself constitute a license. As such, the procedures set forth in § 413.21(a) do not apply to payload reviews, whether conducted independently of or in conjunction with a license application.

The FAA also declines to incorporate CSSMA's suggested timeline for review. The FAA has not specified a timeline to complete payload reviews independent of a license application because, historically, payload owners or operators have requested such reviews for unique missions that have raised novel concerns regarding public health and safety, safety of property, or national security or foreign policy interests of the United States. Because independent payload reviews often raise complex issues and often require extensive interagency consultation, the FAA cannot anticipate a standard timeline for payload reviews conducted independently from a license application. Accordingly, FAA will not establish a standard timeline for such reviews in its regulations. Applicants are encouraged to discuss timelines to review their particular proposals during pre-application consultation.

NZSA requested the FAA include in the final rule all legislative or regulatory standards by which the FAA will assess payloads at the application stage. NZSA stated that doing so would give owners

of novel payloads and non-U.S. operators regulatory certainty on the standards they must meet to be launched on a vehicle licensed by the FAA. As one example of a rule that would affect payload review but did not appear in proposed § 450.41, NZSA cited the prohibition on launching payloads for ''Obtrusive Space Advertising.''

The FAA declines to expand the bases for issuing an unfavorable payload determination beyond those set forth in § 450.43(a). It would not be practical to list every law, regulation, and policy that may possibly affect a proposed payload under § 450.43. Rather, applicants are required to complete a pre-application consultation during which the FAA can learn about the proposed action and advise the applicant on a path forward, including any U.S. regulations, laws, or policies that may impact its proposal. Payload owners and operators may also use the independent payload review process set forth in § 450.43(d), which provides greater regulatory certainty for novel payloads.

Virgin Galactic suggested the FAA treat payloads that stay within a vehicle as additional equipment on the launch vehicle, subject only to the safety analysis required of any other piece of equipment on board a launch vehicle. Virgin Galactic commented that requiring a payload review for items not ejected from a launch vehicle places an unnecessary burden on operators and the FAA. Virgin Galactic also requested clarification on seemingly contradictory language in the NPRM preamble regarding a payload placed in outer space versus a payload that remained on or within the vehicle.

The FAA disagrees with Virgin Galactic's suggestion. Payloads that (1) stay within a vehicle, (2) do not contain hazardous materials, or (3) have previously been approved may require less scrutiny but are still being placed in outer space and therefore meet the 14 CFR 401.5 definition of ''payload'' and require a payload review. Under 51 U.S.C. 50904(c), the FAA must verify that all licenses, authorizations, and permits required for a payload have been obtained; and that the proposed launch or reentry will not jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States. The FAA therefore declines to exclude from the requirement to obtain a payload review any payload that remains on the vehicle.

Virgin Galactic recommended the FAA amend proposed § 450.31(a)(3), which seemed to require favorable payload determinations for any launch or reentry, noting that not all vehicles carry payloads. Absent this amendment, Virgin Galactic commented it would need to seek a waiver for each non-payload flight, creating an unnecessary burden.

The FAA agrees that an applicant does not need to seek a payload determination if the proposed launch or reentry will not involve a payload. Therefore, the FAA revises § 450.31(a)(3) by adding the phrase, ''if applicable.''

Space Logistics, LLC (Space Logistics) urged the FAA to coordinate with other Federal agencies before expanding its payload review process in order to avoid duplicating activities. Space Logistics noted that the requirements to describe encryption associated with a payload's data storage and transmissions and to provide any information deemed necessary by the FAA under proposed § 450.43(i) were open-ended and may duplicate requirements of the FCC, NASA, the National Oceanic and Atmospheric Administration (NOAA), or Office of Space Commerce (OSC).

The FAA agrees with Space Logistics's comment that Federal agencies must continue to streamline requirements applicable to commercial space activities and work closely to eliminate duplicative requirements and minimize review times for policy and payload issues. The FAA has engaged its Federal partners in this rulemaking process in order to minimize duplication. For instance, the FAA proposed to require that applicants provide encryption data (in § 450.43(i)(1)(x)) in part to support the Department of Defense (DOD) review of payloads for impacts to national security. Encryption information allows the DOD to assess impacts on national security due to potential cyber intrusion or loss of vehicle control. Through its interagency coordination, the FAA endeavors not to request information already provided to other Federal agencies.

Boeing, Lockheed Martin, Northrop Grumman, and ULA suggested adding to proposed § 450.43(a) a requirement for FAA coordination with the applicable Federal agency to ensure that the payload will not interfere with or impede launch, on-orbit operations, or reentry of other approved missions. The commenters stated this addition would avoid adverse impacts to other federally-approved missions or operating systems.

Although the FAA agrees that coordination with applicable Federal agencies is important to ensure a payload or payload class will not interfere with agency operations, the FAA disagrees that the recommended addition to § 450.43(a) is necessary. The interagency coordination required for both payload and license application review, coupled with the criteria set forth in § 450.43(a)(1) and (a)(2), adequately addresses the commenters' concerns. Those provisions direct that the FAA will issue a favorable payload determination if (1) the applicant, payload owner, or payload operator has obtained all required licenses, authorizations, and permits; and (2) the launch or reentry of the payload would not jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States. The FAA notes, consistent with current practice, that if a payload or payload class presents a potential risk to an agency's asset or other mission, the FAA may seek additional information from an applicant on behalf of the agency to protect U.S. Government interests and assets consistent with these two objectives. However, in light of commenters' concerns, the FAA is working with the appropriate agencies to increase transparency and support the development of agency guidance on the interagency consultation process during a payload review. The FAA also plans to publish its own guidance on payload review, in the form of an Advisory Circular, which will reference NASA, DOD, or other agency guidance. Insight into the interagency process will help operators anticipate what questions and concerns may arise during interagency consultation, which may vary depending on the operation, and will allow operators to be better prepared to address any potential issues during payload review. To the extent the commenters intended to address space traffic management or access-to-space issues, such matters exceed the scope of this rulemaking.

Boeing suggested the FAA refrain, in proposed § 450.43(b)(2), from issuing a determination on payload components owned, sponsored, or operated by the U.S. Government. Similarly, Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended the FAA exclude from the review requirement in proposed § 450.31(a)(3) any payloads that have undergone safety review or received approval by another Federal agency.

The FAA declines to exclude from review under § 450.43(b) payloads that are sponsored by the U.S. Government. Section 450.43(b)(2) excludes payloads owned or operated by the U.S.

Government. Payloads that are not owned or operated by the U.S. Government may not have undergone the same scrutiny, and hence the FAA review is warranted. The FAA also disagrees with the recommended change to § 450.31(a)(3). Although the FAA does not make a determination on those aspects of payloads that are subject to regulation by other Federal agencies, the FAA does review all payloads to determine their effect on the safety of launch, which may differ from the purpose of another agency's payload review. As such, no change from the proposal is made.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended adding to the agencies listed in proposed § 450.43(e)(3) the FCC, NOAA, and the National Telecommunications and Information Administration. The commenters also proposed adding to the interagency consultation process set forth in proposed § 450.43(e) a requirement that the FAA consult with Federal launch or reentry sites to coordinate facility information for MPL determination, and to coordinate collision avoidance analysis with the cognizant Federal agency, when the launch or reentry activity is not on a Federal launch or reentry site. The commenters stated that operators should not have to obtain and provide Federal site facility information, which is often sensitive and not available to commercial operators.

The FAA disagrees that the recommended addition to § 450.43(e)(3) is necessary. The list of agencies that the FAA consults with under § 450.43(e) is not exhaustive and does not preclude consultation with any other Federal entity in order to ensure that a payload meets the criteria set forth in § 450.43. With respect to the recommendation for the FAA to add the interagency consultation process to its MPL determination, current regulations address coordination. In addition, changes to part 440 are outside the scope of the rulemaking. In accordance with 14 CFR 440.7(b), the FAA consults with Federal agencies that are involved in, or whose personnel or property are exposed to risk of damage or loss as a result of, a licensed activity and obtains any information needed to determine financial responsibility requirements. Similarly, collision avoidance analysis is conducted wholly outside of the payload review. Part 450 provides for coordination of collision avoidance analyses with the cognizant Federal agency, though this coordination is primarily conducted on a launch-by-launch basis, and well after the payload review process, which often occurs during the application review process.

f. Safety Review and Approval (§ 450.45)

i. Launch and Reentries From a Federal Launch or Reentry Site (§ 450.45(b))

In the NPRM, to address concerns regarding duplicative government requirements at Federal launch or reentry sites, the FAA proposed largely performance-based requirements for both ground and flight safety that an operator could meet using Air Force and NASA practices as means of compliance. The FAA pointed out that it issues a safety approval to a license applicant proposing to launch from a Federal launch or reentry site if the applicant satisfies the requirements of part 415, Subpart C (Safety Review and Approval for Launch from a Federal Launch Range), and has contracted with the Federal site for the provision of safety-related launch services and property, as long as an FAA LSSA shows that the site's launch services and launch property satisfy part 417. The FAA did not refer to the LSSA process in the regulatory text in proposed part 450. The FAA did propose, in § 450.45 (Safety Review and Approval) paragraph (b), that the FAA would accept any safety-related launch or reentry service or property provided by a Federal launch or reentry site or other Federal entity by contract, as long as the FAA determined that the launch or reentry services or property provided satisfy part 450.

The FAA adopts § 450.45(b) as proposed, with one revision. The FAA changes the reference to ''Federal range'' to ''Federal launch or reentry site'' throughout part 450, to include NASA and DOD launch and reentry sites.

As discussed in the NPRM preamble, the FAA assesses each Federal launch or reentry site and determines if the Federal site meets FAA safety requirements. If the FAA assessed a Federal launch or reentry site and found that an applicable safety-related launch service or property satisfies FAA requirements, then the FAA treats the Federal site's launch service or property as that of a launch operator's, and there is no need for further demonstration of compliance to the FAA. The FAA reassesses a site's practices only when the site changes its practice. The final rule maintains the position discussed in the NPRM, namely that these performance-based regulations allow an operator to use DOD and NASA practices as a means of compliance. In addition, this rule introduces a provision that allows operators operating from certain Federal sites to opt out of demonstrating compliance with the FAA's ground safety requirements.

CSF and Space Florida submitted comments indicating their dissatisfaction with the NPRM's approach to reducing duplication regarding launch from a Federal launch or reentry site. ULA encouraged the FAA to reduce duplication between the FAA and Federal sites.

Northrop Grumman commented that the FAA should accept the Federal launch or reentry site safety processes as satisfying FAA requirements because it was reasonable to presume changes to launch range regulations would continue to provide for safe pre-flight and flight operations on Federal launch or reentry sites. Similarly, SpaceX stated that part 450 or its supporting documents should reference agreements between the FAA and other Federal entities, including the USAF, which allow each agency to accept the analyses and technical determinations of the other. Blue Origin commented that it looks forward to understanding the contents of any agreements between the ranges and the FAA.

Another individual commenter raised similar concerns that the FAA's proposed licensing regulations do not resolve long-standing issues with duplicative and overlapping rules burdening commercial launch operators at the KSC and CCAFS. CSF stated that duplicative or conflicting rules among overlapping Federal jurisdictions create a barrier to entry for small startups and unnecessarily increase the cost of space access to all users by forcing all providers either to pass those costs on to their customers (including the U.S. Government) or to be denied the availability of new capabilities due to lack of bandwidth and resources. CSF argued that this burden will drive internationally-competed business to other countries to avoid the cost or schedule impacts arising from duplicative, conflicting, and overlapping sets of rule. CSF also argued the FAA did not address the overlapping jurisdiction of the FAA and other Federal and State agencies (the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), and their State and local equivalents) for hazardous ground operations.

The FAA does not agree with the comment that the FAA is duplicating oversight with other agencies such as OSHA, EPA, and ATF. Commercial space activities may be subject to the

jurisdiction of multiple Federal agencies depending on the types of activities that are being conducted. OSHA, EPA, and ATF may regulate or provide oversight for different aspects of an operation without duplicating FAA oversight. The authority for protecting public health and safety, safety of property, and national security and foreign policy interests of the United States during commercial space launches and reentries remains solely with the FAA.

In the interest of removing duplicative authorities, CSF suggested the FAA should acknowledge when other agencies have jurisdiction over activities and not duplicate that oversight. SpaceX recommended that instead of the FAA's determining that the launch or reentry services or property provided by a Federal launch or reentry site or other Federal entity satisfy part 450, the FAA should just determine that the site operations are in good standing.

In the final rule, an operator may meet part 450's performance-based requirements using DOD and NASA practices that have been accepted by the FAA as a means of compliance. An applicant would reference in its application those DOD or NASA requirements or procedures accepted as means of compliance. The 2015 Commercial Space Launch Competitiveness Act directed the Secretary of Transportation to consult with the Secretary of Defense, Administrator of NASA, and other agencies, as appropriate, to identify and evaluate requirements imposed on commercial space launch and reentry operators to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States. It also directed the Secretary of Transportation to resolve any inconsistencies and remove any outmoded or duplicative Federal requirements or approvals applicable to any commercial launch of a launch vehicle or commercial reentry of a reentry vehicle.[35] The FAA has worked closely with DOD and NASA in developing part 450 to minimize any need for a DOD or a NASA facility to impose additional requirements.[36] The FAA will continue to work with DOD and NASA in reviewing means of compliance that involve these Federal entities' practices to ensure those practices continue to satisfy the FAA's part 450 requirements. The FAA expects that there will be few, if any, instances in which DOD or NASA practices do not satisfy part 450's performance-based requirements. In addition, part 450 should provide enough flexibility to accommodate changes in DOD and NASA practices in the future.

In addition to issuing performance-based requirements that an operator could meet using DOD and NASA practices as means of compliance, the FAA has addressed concerns regarding duplicative government requirements by modifying its approach to ground safety at certain Federal sites. For ground safety, the Administrator may determine that the Federal launch or reentry site's ground safety processes, requirements, and oversight are not inconsistent with the Secretary's statutory authority over commercial space activities. Therefore, under § 450.179 (Ground Safety—General) paragraph (b), an operator is not required to comply with the ground safety requirements of part 450 if:

(1) The launch or reentry is being conducted from a Federal launch or reentry site;

(2) The operator has contracted with the Federal launch or reentry site for ground safety services or oversight; and

(3) The Administrator has determined that the Federal launch or reentry site's ground safety processes, requirements and oversight are not inconsistent with the Secretary's statutory authority over commercial space activities.

In making the determination to accept the Federal site's processes without specific compliance with ground safety regulations, under § 450.179(c), the Administrator will consider the nature and frequency of launch and reentry activities conducted from the Federal launch or reentry site, coordination between the FAA and the Federal launch or reentry site safety personnel, and the Administrator's knowledge of the Federal site's requirements. The FAA will consider the nature and frequency of the activity in order to evaluate a site's level of experience with different types of launch and reentry operations. An example of the ''nature'' of the launch and reentry activities would be that a site's experience with non-toxic or non-explosive propellant might not qualify the site for an exemption from FAA ground safety requirements involving toxic or explosive materials. The FAA makes this change to respond to the direction of SPD–2, the National Space Council, and the recommendation of the ARC to address duplicative requirements across Federal agencies for commercial space licensing.

In the final rule, an operator need not comply with the ground safety requirements contained in §§ 450.181 (Coordination with a Site Operator) through 450.189 (Ground Safety Prescribed Hazard Controls) if the conditions in § 450.179(b) are met. In making this change, the FAA preserves its statutory jurisdiction over those ground safety activities that are part of launch and reentry, but recognizes certain Federal processes and procedures as sufficient to meet the FAA's mandate.

For § 450.179(b) to apply, an operator must conduct launch or reentry activities from a Federal launch or reentry site. The FAA limits the applicability of this provision to certain Federal sites, such as Kennedy Space Center and Cape Canaveral Air Force Station, because they have a long history of conducting launches and reentries in a manner consistent with FAA regulations. In addition, an operator must contract with the Federal launch or reentry site for ground safety services or oversight. The FAA would require that the operator have a written agreement with the Federal site to use its ground safety services or oversight and comply with its ground safety processes and requirements. Finally, the Administrator must have determined, consistent with the considerations in § 450.179(c), that the Federal launch or reentry site's ground safety processes, requirements, and oversight are not inconsistent with the Secretary's statutory authority over commercial space activities. In considering the site's ground safety record, the Administrator will consider the extent and sophistication of both its ground safety procedures and the frequency with which the site uses them during FAA-licensed activities.

In making the determination to accept a Federal site's ground safety procedures, the Administrator generally will accept only those sites that have a regular cadence of both commercial and government launches and highly developed, well-understood processes and procedures. In considering the coordination between the FAA and the Federal site safety personnel, the Administrator generally will approve only those sites with which the FAA has a long-term working relationship through the Common Standards Working Group (CSWG). Familiarity with a Federal site's ground safety practices and procedures is the only means by which the FAA can ensure it has met its statutory obligation to ensure public health and safety, safety of

[35] Public Law 114–90—Nov. 25, 2015 U.S. Commercial Space Launch Competitiveness Act.

[36] Note that the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (NDAA) includes a provision stating that the Secretary of Defense may not impose any requirement on a licensee or transferee that is duplicative of, or overlaps in intent with, any requirement imposed by the Secretary under 51 U.S.C. chapter 509, unless imposing such a requirement is necessary to avoid negative consequences for the national security space program.

property, and national security and foreign policy interests of the United States. When the Administrator finds that a site meets the conditions in § 450.179(b), the FAA will develop a Memorandum of Agreement (MOA) with the approved site and publish the MOA on the FAA's website. If these conditions are met, then the operator can seek FAA permission during pre-application consultation to comply only with the ground safety regulations imposed by the Federal site. The FAA will publish, maintain, and update the Federal launch and reentry site ground safety MOAs on its website.

For Federal launch or reentry sites or other Federal entities that do not satisfy the conditions in § 450.179(b), the final rule retains the LSSA-like process in accordance with § 450.45(b). As noted earlier, the FAA believes that because of the performance-based nature of part 450, Federal launch or reentry sites will typically satisfy most or all FAA requirements.

ii. Radionuclides (§ 450.45(e)(6))

In the NPRM, the FAA proposed in § 450.45(e)(6) that the FAA would evaluate the launch or reentry of any radionuclide on a case-by-case basis, and issue an approval if the FAA finds that the launch or reentry is consistent with public health and safety, safety of property, and national security and foreign policy interests of the United States. For any radionuclide on a launch or reentry vehicle, an applicant would need to identify the type and quantity, include a reference list of all documentation addressing the safety of its intended use, and describe all approvals by the Nuclear Regulatory Commission for pre-flight ground operations.

SpaceX requested that the FAA clarify the intent of this regulation, as this topic is heavily regulated by other Federal entities. In addition, SpaceX recommended that the FAA defer to and accept results from other Federal entities when applicable, and stated that processes for acceptance and deferral should be provided in an AC.

As discussed in the NPRM preamble, § 450.45(e)(6) will address the potential launch or reentry of radionuclides, similar to current § 415.115(b), but with the addition of reentries. It is the current practice of the FAA to address novel public safety issues on a case-by-case basis because such proposals are so rarely encountered in commercial space transportation. When applicable, FAA will work closely with other Federal entities to avoid duplicative requirements. Moving forward however, the Presidential Memorandum on Launch of Spacecraft Containing Space Nuclear Systems [37] directs the Secretary to issue public guidance for applicants seeking a license for launch or reentry of a space nuclear system. The FAA is currently developing this guidance.

g. Environmental Review (§ 450.47)

In the NPRM, the FAA proposed to consolidate and clarify environmental review requirements for launch and reentry operators in a single section, § 450.47 (Environmental Review). In addition, the FAA proposed to revise §§ 420.15, 433.7, 433.9, and 437.21 to conform to the changes in proposed § 450.47. These revisions codify the environmental review process as currently conducted, in accordance with FAA Order 1051.F, in which applicants for a launch or reentry license provide the FAA with the information needed to comply with the National Environmental Policy Act (NEPA) and other applicable environmental laws, regulations, and Executive Orders.

In the final rule, the FAA adopts § 450.47 as proposed with revisions. The FAA revises § 450.47(b) to affirmatively state that an applicant must prepare an Environmental Assessment (EA), assume financial responsibility for preparation of an Environmental Impact Statement (EIS), or provide information to support a written re-evaluation of a previously submitted EA or EIS, when directed by the FAA. The FAA revised this section to clarify that the FAA, not the applicant, determines which environmental documentation is required by NEPA. If the FAA determines that under NEPA an EIS is required, the FAA will select a contractor to prepare the EIS for the license applicant who will pay the contractor. The FAA also revised §§ 420.15(b), 433.7(c), 437.21(b)(1)(iii), and 450.47(c) to clarify that it is the FAA's responsibility to determine whether a Categorical Exemption (CATEX) applies under NEPA.

An applicant may provide data and analysis to assist the FAA in determining whether a CATEX could apply (including whether an extraordinary circumstance exists) to a license action. Examples include modifications that are administrative in nature or involve minor facility siting, construction, or maintenance actions. In the final rule, the FAA revises §§ 420.15(b), 433.7(c), 437.21(b)(1)(iii), and 450.47(c) to state affirmatively that it is the FAA's responsibility to determine whether a CATEX applies rather than an applicant's responsibility to request a CATEX.

If a CATEX does not apply to the proposed action, but it is not anticipated to have significant environmental effects, then NEPA requires the preparation of an EA. When directed by the FAA, an applicant must prepare an EA with FAA oversight. When NEPA requires an EIS for commercial space actions, the FAA uses third-party contracting to prepare the document. That is, the FAA selects a contractor to prepare the EIS, and the license applicant pays the contractor. Finally, if an EA or EIS was previously developed, the FAA may require an applicant to submit information to support a written re-evaluation of the environmental document by an FAA-selected contractor to ensure the document's continued adequacy, accuracy, and validity.[38]

This rule will not alter the current environmental review requirements. However, as explained in the NPRM preamble, the consolidation of the launch and reentry regulations necessitates a consolidation of the environmental review requirements.

CSF asked the FAA to explain why it added the requirement that applicants prepare EAs with FAA oversight, assume financial responsibility for preparation of an EIS, or submit a written re-evaluation of a previously submitted EA or EIS. CSF requested clarification on the phrase ''under FAA oversight'' in proposed § 450.47, versus the current language in FAA Order 1050.1 that requires FAA approval of an applicant-prepared EA. CSF requested further that the FAA clarify when and for what purpose the FAA might require an applicant to prepare a written re-evaluation of a previously-submitted EA or EIS, noting that the costs and schedule impacts of this requirement are unclear.

As noted in the NPRM, the changes to the regulatory text on environmental review do not represent a substantive change to past regulations or to current practice. Section 450.47 reflects the existing environmental review process that §§ 415.201 and 415.203 broadly described, in which applicants must provide sufficient information to enable the FAA to comply with NEPA. Section 450.47 replaces this general requirement by identifying the specific documents that the FAA may require applicants to

[37] *https://www.whitehouse.gov/presidential-actions/presidential-memorandum-launch-spacecraft-containing-space-nuclear-systems/* (August, 2019).

[38] FAA Order 1050.1, *Environmental Impacts: Policies and Procedures,* provides a more detailed description of the FAA's policies and procedures for NEPA and CEQ compliance.

provide and the process to prepare those documents. The language added to § 450.47 reflects current practice and is consistent with NEPA and FAA policy. According to FAA Order 1050.1, unless the FAA determines that a categorical exclusion applies, the FAA may prepare an EA, EIS, or written re-evaluation, or direct an applicant to provide the information as described in §§ 450.47(b)(1), (2), and (3).[39] In response to CSF's comment, the FAA revises § 450.47(b), as well as §§ 420.15(b), 433.7(b), and 437.21(b)(1)(ii), from the language proposed in the NPRM to state expressly that an applicant must provide the documents set forth in paragraph (b) ''when directed by the FAA.'' The modified text clarifies the applicant's responsibilities in accordance with FAA Order 1050.1 (Paragraph 2–2–2). These responsibilities are consistent with current practice and will not increase the cost, impact schedules, or alter the burden under the previous regulations.

With respect to § 450.47(b)(1), ''with FAA oversight'' means the FAA will guide the work of an applicant or an applicant's contractor. In order to use an applicant or contractor-prepared document for compliance with NEPA or other environmental requirements, the FAA must evaluate and take responsibility for the document. The FAA's oversight ensures that: (1) The applicant's potential conflict of interest does not impair the objectivity of the document; and (2) the EA meets the requirements of FAA Order 1050.1. The FAA may require an applicant to submit information to support a written re-evaluation of a previously prepared environmental document (*i.e.,* a draft or final EA or EIS) to determine whether the document remains valid or a new or supplemental environmental document is required. Applicants should work closely with the FAA to determine the documentation requirements of NEPA and other applicable environmental requirements.[40] In response to CSF's comment, the FAA revises § 450.47(b)(3), as well as §§ 420.15(b), 433.7(b), and 437.21(b)(1)(ii), to clarify that an applicant would submit ''information to support'' a written re-evaluation of a previously submitted EA or EIS, rather than the re-evaluation document itself, as proposed. The contractor selected by the FAA will use the information provided by the applicant to prepare the re-evaluation document.

CSF commented that the FAA should adopt, to the greatest extent possible, NEPA documentation from other Federal agencies or licensed site operators.

The FAA notes that it may adopt, in whole or in part, another Federal agency's draft or final EA, the EA portion of another agency's EA/FONSI,[41] or EIS in accordance with applicable regulations and authorities implementing NEPA.[42] Whenever possible, the FAA will adopt the other Federal agency's NEPA documents to support the issuance of launch and reentry licenses. Further, the FAA encourages early coordination with the FAA to benefit applicants that are seeking approvals from other Federal agencies related to the FAA-issued license (*e.g.,* an applicant seeking approval from a Federal agency to make modifications on a Federal launch or reentry site in anticipation of receiving a launch license from the FAA). This coordination will increase the likelihood of a more efficient environmental review process as the applicant seeks different but related approvals from multiple Federal agencies. The applicant should consult with the FAA early in the project's development phase, prior to the development of the NEPA document, to determine environmental review responsibilities, and the appropriate level of review, and to foster efficient procedures to develop documentation to meet the agencies' legal requirements.

CSF also encouraged the FAA to request appropriations to fund regional or area EAs. This recommendation is beyond the scope of this rulemaking.

The Aircraft Owners and Pilots Association (AOPA) stated its concern that, under the proposed regulations, existing Special Use Airspace approvals (SUAs) would be activated for purposes that may not align with the original environmental determinations that led to approval of the SUAs. AOPA noted that the environmental process for establishing SUAs includes detailed studies of the intended activity, its frequency, and its effect on the public. Many of the SUAs activated in support of commercial space activity originally underwent environmental review and approval on the assumption that they were supporting military or governmental activity, not commercial civil space operators.

This rule will not affect the environmental determination process for establishing or altering SUAs. Environmental review concerns associated with the designation or activation of SUAs are not the subject of this rulemaking. The FAA notes that all environmental impacts associated with a proposed launch or reentry will be addressed in the NEPA document prepared for that activity.

AOPA urged the FAA to ensure that the documentation for commercial space operations is complete and transparent so that the public can understand and identify potential impacts.

This rule will not alter the current environmental review process, which requires documentation of environmental impacts. The FAA remains responsible for complying with NEPA and other applicable environmental laws, regulations, and Executive Orders prior to issuing a launch or reentry license. The FAA ensures transparency of the potential environmental impacts by publishing all draft and final EAs and EISs, and associated Findings of No Significant Impact and Records of Decisions.

CSF and Denver International Airport requested clarification on how the environmental reviews required under NEPA would apply to multiple sites. In accordance with applicable regulations and authorities implementing NEPA, the FAA's decision-making process must consider and disclose the potential impacts of a proposed action and its alternatives on the quality of the human environment. This process includes considering the impacts of launches from multiple sites, which may be covered in a single NEPA document when appropriate. In some instances, one single NEPA document may not be possible and individual site-specific NEPA documents could be developed. The FAA is examining the use of programmatic NEPA documents to analyze the impacts of launches from multiple sites. Under such an approach, applicants could tier their individual, site-specific NEPA analyses from the programmatic document.[43] The FAA will conduct programmatic EA analyses consistent with FAA Order 1050.1 and CEQ regulations.

SpinLaunch stated the environmental review process is lengthy, sometimes taking as long as 2 years or more. To facilitate the process, it recommended (1) including the environmental review within the statutory period, thereby

[39] Currently, the FAA has not established categorical exclusions for this program. However, the FAA may propose new categorical exclusions applicable to the program after the FAA's performance of NEPA reviews of proposed actions finds that the actions, when implemented, do not result in significant individual or cumulative environmental effects.

[40] *See* FAA Order 1050.1, Section 9–2.

[41] Finding of No Significant Impact.

[42] 40 CFR 1506.3 of the Council on Environmental Quality (CEQ) Regulations and FAA Order 1050.1, as of the publication date of this rule.

[43] *See* Order 1050.1, Section 3–2.

forcing an expedited process; and (2) establishing limited environmental approval for proposed activities (*e.g.,* non-rocket launch systems) that do not have the adverse environmental impacts of a traditional rocket.

The FAA does not consider the 180-day statutory review period to include NEPA document preparation. Specifically, the applicant must submit a completed EIS prepared by the FAA (or an FAA-selected and managed consultant contractor) or an FAA-approved EA, categorical exclusion determination from the FAA, or written re-evaluation as part of its application materials. The statutory application review period is not intended to encompass the time needed for the applicant to develop the necessary application materials, including environmental documentation. Regarding the commenter's second recommendation, the FAA is bound by CEQ's NEPA regulations. There are three levels of NEPA review: CATEX, EA, and EIS. Each of the three levels of review is described in FAA Order 1050.1. The required level of review depends on the nature of the commercial space action. Applicants should coordinate with the FAA early in the application process to determine the appropriate level of NEPA review based on the potential for significant impact.

Boeing, Lockheed Martin, Northrop Grumman, and ULA jointly recommended adding to proposed § 450.47(a) a statement requiring the FAA to coordinate with other government entities to assist the applicant in completing EAs, in order to alleviate the cost impact on operators who currently have to negotiate multiple sets of requirements by Federal, State, and local governments. The joint commenters also recommended amending §§ 420.15(b)(ii), 433.7(b)(2), and 450.47(b)(2) to allow EISs to be prepared by an FAA-approved consultant contractor, in addition to one selected and managed by the FAA. The commenters suggested these changes would provide flexibility and allow an operator to use qualified EIS contractors at the State- or local-level as long as the contractor meets the qualifications for completing an EIS in accordance with the law.

The FAA declines the suggested regulatory text changes.

Section 1506.5(c) of the CEQ Regulations for Implementing the Provisions of NEPA and Appendix C of FAA Order 1050.1 state that EISs must be prepared by a contractor selected by the lead agency to avoid a conflict of interest.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended the FAA craft an additional section to proposed § 450.47 to address space environmental impacts such as debris, collision risk, and interference.

The FAA does not agree with this recommendation. The applicability of NEPA to space debris is outside the scope of this rulemaking.

One individual commenter expressed concern that the proposed part 450 may cause companies to forgo environmental considerations or somehow bypass compliance requirements. The proposal does not alter NEPA and will continue to require potential licensees to comply with all policies and procedures implementing NEPA, as well as other applicable environmental laws, regulations, and Executive Orders intended to protect the environment.

4. Part 450 Subpart C—Safety Requirements

a. Neighboring Operations Personnel (§ 450.101(a) and (b))

In the NPRM, the FAA proposed to carve out separate individual and collective risk criteria for neighboring operations personnel. The proposal was intended to reduce the need to clear or evacuate other launch operator personnel during a commercial launch or reentry operation. Under the current regulations, an operator may be required to clear anywhere from a handful of employees to over a thousand employees from a neighboring site for a significant portion of a day. To address this issue, the NPRM proposed to define ''public'' and ''neighboring operations personnel'' in § 401.5. Under the proposal, neighboring operations personnel would still be members of the public, but would be subject to different individual and collective risk criteria. These proposed regulations were intended to enable neighboring operations personnel to remain within safety clear zones and hazardous launch areas during flight as long as their risk did not exceed the newly designated thresholds.

In the final rule, the FAA adopts the proposal for neighboring operations personnel in §§ 401.7, 440.3, 450.101(a) and (b), and 450.137(c)(6). The FAA revises the § 401.7 definition of ''neighboring operations'' by removing the phrase ''as determined by the Federal or licensed launch or reentry site operator'' because the phrase is not relevant to the definition of neighboring operations personnel. The FAA also revises § 450.133 (Flight Hazard Area Analysis) paragraph (e)(2) to require that an applicant provide the hypothetical location of any member of the public that could be exposed to a probability of casualty of 1×10^{-5} or greater for neighboring operations personnel, in response to a comment to clarify representative probability contours.

The FAA sought comment on the proposed approach, as well as on proposals (1) not to require that neighboring operations personnel be specially trained, (2) not to designate ground operations hazard criteria for neighboring operations personnel, and (3) for the purpose of determining MPL, to align the individual risk threshold for neighboring operations personnel with the threshold for losses to government property and involved government personnel. Many commenters agreed with the FAA's proposal to change the risk threshold for neighboring operations personnel, stating that a higher risk threshold is necessary to allow for co-processing of multiple operations at a single facility. Despite this general agreement, some commenters disagreed with the specifics of the proposal. Several commenters pointed out that the FAA's approach to neighboring operations personnel differs from the ARC recommendation to exclude permanently badged personnel and neighboring launch operations from the definition of ''public'' but still to employ mitigation measures for uninvolved neighboring operations personnel when a hazardous operation or launch is scheduled.

Several commenters, including Blue Origin, Boeing, CSF, Lockheed Martin, Northrop Grumman, Space Florida, SpaceX, ULA, and Virgin Orbit, commented that neighboring operations personnel should not be included as members of the public. CSF stated that neighboring operations personnel should not be considered members of the public because they have essential, on-going requirements to conduct neighboring space transportation activities. CSF further stated that the FAA has the flexibility to exclude neighboring operations personnel from its definition of ''public.'' Blue Origin similarly stated that neighboring operations personnel are more familiar with the hazardous operations present at a launch site and may have a relationship or engagement with their neighboring operators and, therefore, should be treated differently from the public who are completely uninvolved and are not knowledgeable about launch and reentry operations. Space Florida also commented that employees of the licensee who may be working on a test program or a different launch or reentry program are not members of the public and raised the question whether the

FAA should have statutory authority over launch essential personnel of a neighboring operator for other launch, reentry, or associated operations. Virgin Orbit commented that it would be better to include neighboring operations personnel under launch personnel, rather than requiring a new and possibly burdensome expected casualty analysis.

The FAA agrees that neighboring operations personnel are a unique category of people because of their essential, ongoing tasks. The FAA disagrees, however, with commenters' assertions that neighboring operations personnel should be excluded from the definition of ''public'' because of their involvement in launch operations or the tasks they are expected to perform. The FAA has a statutory obligation to protect the health and safety of members of the public. Prior to this rulemaking, the FAA defined public safety, for a particular licensed launch, as the safety of people and property that are not involved in supporting the launch, including those people and property that may be located within the boundary of a launch site, such as visitors, individuals providing goods or services not related to launch processing or flight, and any other launch operator and its personnel. The FAA's definition of ''public'' is derived from the definition of ''public safety'' in § 401.5 and the definition of ''public'' in § 420.5.[44]

The FAA's definition of ''public'' encompasses neighboring operations personnel because they are not involved in supporting the specific launch or reentry they are neighboring. The FAA agrees that neighboring operations personnel are more familiar with the hazardous operations present at a launch site and may have a relationship or engagement with their neighboring operators, but the FAA does not find that to be sufficient to exclude them from the definition of ''public.'' It was a factor, however, in the FAA's decision to apply a risk requirement to neighboring operations personnel different from the requirement applied to other members of the public. Although this rule includes neighboring operations personnel in the definition of ''public,'' the FAA recognizes that neighboring operations personnel are aware of the inherent risks associated with launch and reentry activities and are likely trained and prepared to respond to hazards present at these sites. Because of these differences, as well as their unique role in performing safety, security, and critical tasks, the FAA considers neighboring operations personnel a separate category of public, whose collective exposure to risk may not exceed 2×10^{-4} and for whom the risk to any individual may not exceed 1×10^{-5}.

The FAA disagrees with Virgin Orbit's comment that neighboring operations personnel should be included as launch personnel so as to be exempted from risk calculations and eliminate the burden of the additional risk calculation. Neighboring operations personnel are not supporting the licensed activity and are members of the public; therefore, they must be protected under the FAA's statutory mandate. The FAA acknowledges that this conclusion requires risk analysis for the neighboring operations personnel; however, the FAA expects that this analysis will involve little additional effort because the operator already has to perform a similar analysis for the other members of the public and will only need to account for the population of neighboring operations personnel, if any. For these reasons, the FAA adopts the proposal without amendment.

In addition to comments recommending that neighboring operations personnel be excluded from the definition of ''public,'' several commenters had other recommendations for the proposed definition of ''public.'' CSF commented that the proposal does not specify how involved in a licensed operation a person needs to be to fall outside public risk protections. CSF also proposed that the definition of ''public'' should allow for a risk threshold for those who have been briefed on the risks and hazards and chosen to participate to the same level as neighboring operations personnel, and that historic NASA operations have followed this model. CSF further stated that the definition of ''public'' should not include persons who have a passive involvement in the licensed activity, such as invited guests of the operator, customers, families of astronauts, and other stakeholders with a legitimate enough interest in the launch or reentry activity to be on-site. SpaceX echoed CSF's comments on this issue, and further suggested that the definition of ''public'' should generally include only those people who reside and work outside the controlled areas of a launch or reentry site. Blue Origin, CSF, and SpaceX recommended excluding invited guests of the launch or reentry operator from the definition of ''public.''

As discussed earlier, the FAA's definition of ''public'' was derived from the definition of ''public safety'' in § 401.5 and the definition of ''public'' in § 420.5. Historically, the FAA has considered ''public'' to include all people and property that are not involved in supporting a licensed or permitted launch and in the final rule extends the same definition to reentry. While neighboring operations personnel or invited guests[45] may accept a higher level of background risk, they are not involved in supporting the particular licensed operation and this rule continues the FAA's longstanding practice of protecting them as members of the ''public.'' While the FAA expects that certain members of the public may be briefed and aware of hazards, the FAA does not agree with CSF's rationale that being informed is a sufficient condition for such persons to be treated under the higher risk threshold for neighboring operations personnel. In addition to being informed of potential hazards, neighboring operations personnel are required to perform safety, security, or critical tasks at the neighboring site. The FAA finds that the necessity of these tasks justifies the minimal increase in risk to which neighboring operations personnel are exposed. Informed members of the public do not meet this criterion and, therefore, will continue to be protected at the public threshold rather than the higher threshold for neighboring operations personnel.

The FAA considered potential regulatory mechanisms for allowing public stakeholders with a legitimate enough interest in the launch or reentry activity to be on-site as requested by commenters. However, the FAA identified certain statutory and regulatory challenges with making these changes as a part of this final rule. Given the inherent risks associated with commercial space activity, Congress established a framework for liability insurance and financial responsibility that distinguishes individuals involved in launch or reentry activities from third parties. Section 50902 defines third party as persons other than launch or reentry participants.[46] Section 50914

[44] Both of these definitions are being replaced by the new, consolidated definition of ''public'' in § 401.7.

[45] The FAA is not proposing a higher risk threshold for invited guests or other consenting members of the public at this time.

[46] Specifically, in accordance with § 50902(26), ''third party'' means a person except—

(A) the United States Government or the Government's contractors or subcontractors involved in launch services or reentry services;

(B) a licensee or transferee under this chapter;

(C) a licensee's or transferee's contractors, subcontractors, or customers involved in launch services or reentry services;

(D) the customer's contractors or subcontractors involved in launch services or reentry services; or

(E) crew, government astronauts, or space flight participants.

states that a licensee must obtain liability insurance to protect launch or reentry participants from third party claims, based on maximum probable loss calculations.[47] Additionally, section 50914(b) establishes a reciprocal waiver of claims regime for applicable parties whereby each party to the waiver agrees to be responsible for personal injury to, death of, or property damage or loss sustained by it or its own employees resulting from an activity carried out under the applicable license. This regime includes certain parties waiving claims against the U.S. Government.[48] The FAA has codified these requirements in the part 440 regulations.

While the FAA may waive certain risk requirements in order to allow members of the public to be present in hazard areas during launch or reentry activities, these individuals are third parties under title 51 and will therefore be included in maximum probable loss calculations. This would likely increase insurance costs, which would be borne by the licensee. Additionally, these individuals are not currently included in title 51's cross-waiver framework nor has the FAA gone beyond the scope of title 51 in part 440 to expand the cross-waiver framework to include them. As such, their presence in hazard areas during launch or reentry activities may increase the liability of the United States (and others involved in the launch who have executed cross-waivers with the operator) because of the increased potential for third party claims. Finally, any regulatory changes would need to be effectuated in part 440 where the FAA's financial responsibility requirements for commercial space transportation are located; however, the FAA did not contemplate substantial changes to part 440 in this rulemaking. Because of these challenges, the FAA elects to proceed with a waiver regime rather than a regulatory change at this time.The FAA notes that operators may request waivers to allow members of the public to be present in areas where risk requirements under part 450 would not otherwise allow them to be during launch and reentry activities.[49] Such requests can serve a purpose of encouraging, facilitating, or promoting commercial space launches and reentries by the private sector, facilitating private sector involvement in commercial space transportation activity, and promoting public-private partnerships. However, the FAA expects operators to articulate more specifically the reasons why allowing particular individuals to be in areas they otherwise would be prohibited from entering is in the public interest. In considering such waiver requests, the FAA would be mindful of its role in protecting the public and accounting for any additional liability such a waiver would impose on the U.S. Government. Some factors that would affect the FAA's decision may include the number of people an operator seeks to have present and the strength of association between those people and the launch or reentry activity. Individuals that have an employment or contractual arrangement with the licensee, or are otherwise part of the cross-waiver framework of the license, may pose minimal, if any, liability for the U.S. Government. This could include high-level company officials and U.S. Government officials. Members of the public for whom a waiver is requested should have a strong connection to the launch, reentry, or licensee; for example, future customers, major investors, or invited press might qualify.

The operator bears the burden of providing adequate justification for this relief through the waiver process. The operator should include in its waiver application an assessment of the risks to the individuals covered by the requested waiver,[50] information on how the operator will assume liability and hold the U.S. Government harmless, and the individuals' association to the launch, reentry, or licensee. The FAA anticipates using its experience in considering waivers to accommodate the presence of additional members of the public during commercial space launch and reentry activities to inform potential future rulemaking in this area.

The FAA also received several comments on the proposed definition of ''neighboring operations personnel.'' Blue Origin requested that the FAA further define the term ''critical tasks'' referenced in the new definition to include ''tasks that are critical to normal business operations.''

The FAA does not agree that adding Blue Origin's definition of ''critical tasks'' is necessary. In the absence of a regulatory definition, the plain language definition applies and is sufficient here. In addition, the FAA gave context in the preamble to the NPRM for the types of activity that may qualify as ''safety, security, or critical tasks.'' The plain language definition maintains flexibility to include various tasks as industry practices evolve over time. These tasks include maintaining the security of a site or facility or performing critical launch processing tasks such as monitoring pressure vessels or testing safety-critical systems of a launch vehicle for an upcoming mission. These tasks also include business operations that cannot be reasonably conducted off site, such as onsite hardware work as well as data processing that must be conducted in a secure facility. Neighboring operations personnel do not include individuals conducting normal business operations that need not be conducted in hazardous areas, individuals in training for any job, or individuals performing routine activities such as administrative, office building maintenance, human resource functions, or janitorial work. This flexibility accommodates practices like those USAF and NASA follow at their launch sites and is intended to allow critical operations to proceed at neighboring locations without jeopardizing those operations. As explained in the NPRM, neighboring operations personnel are members of the public. The FAA allows a slightly increased risk to these personnel over that permissible to other members of the public. The FAA does not believe that an increase in risk is justified for reasons other than to facilitate performing safety, security, or critical tasks at the site. The FAA estimates that the collective risk criteria in the final rule for neighboring operations personnel will enable, on average, approximately forty additional personnel to operatate in this capacity, which the FAA believes will ensure that neighboring operators can maintain operations with minimum disruption.

Virgin Galactic commented that the definition of ''neighboring operations personnel'' should include all personnel who have been properly trained to respond to hazards present at a launch or reentry site and who are notified of hazardous operations occurring by other licensed operators at that site. Virgin

[47] Specifically, in accordance with § 50914(a)(4), the insurance must protect the following, to the extent of their potential liability for involvement in launch services or reentry services, at no cost to the Government:

(A) the Government.

(B) executive agencies and personnel, contractors, and subcontractors of the Government.

(C) contractors, subcontractors, and customers of the licensee or transferee.

(D) contractors and subcontractors of the customer.

(E) space flight participants.

[48] 51 U.S.C. 50914(b)(2).

[49] Should the FAA grant such a waiver, any individuals to whom the waiver applied would still constitute third parties under title 51 U.S.C. 50902, and operators would continue to be required to obtain liability insurance or demonstrate financial responsibility to cover third party claims as required by 51 U.S.C. 50914 and 14 CFR part 440.

[50] An operator may perform a risk analysis using its own methods or the risk analyses identified in part 450 in order to demonstrate the individual and collective risks imposed on the individuals identified in the waiver request.

Galactic objected to including in the definition a requirement that neighboring operations personnel be notified of the operation, stating that a lack of notification should not exclude individuals from qualifying as neighboring operations personnel. Similarly, ULA commented that the requirement appeared to be mostly in the definition, which ''removes the definition's objectivity.''

FAA disagrees with Virgin Galactic that training and notification are sufficient to justify the inclusion of personnel in the neighboring operations personnel category. Training alone does not justify placing personnel at a raised level of risk. Only those personnel performing safety, security, or critical tasks qualify as neighboring operations personnel who may be subjected to a higher risk threshold because of the nature of those tasks, as discussed previously and in the NPRM. Furthermore, as explained in the NPRM, requiring a licensee to ensure neighboring operations personnel are trained would be burdensome and is not necessary to justify the increase in risk allowed for workers performing safety, security, or critical tasks.

The FAA does not agree with Virgin Galactic and ULA that the definition of ''neighboring operations personnel'' imposes a regulatory requirement. Rather, it enables neighboring operations to continue by describing which individuals qualify as neighboring operations personnel. Notification of an operation is a precondition to qualify as neighboring operations personnel. Personnel cannot be designated as neighboring operations personnel and be subject to the higher risk thresholds, if they have not been notified of the operation. For these reasons, the FAA declines to accept these particular changes to the proposed definition.

A number of commenters focused on which authority designates personnel as neighboring operations personnel. Many commenters, including CSF, Space Florida, and SpaceX, noted their agreement that the designation of neighboring operations personnel should be coordinated and determined by the site operator, but urged the FAA to remove its proposed neighboring operations personnel risk thresholds and instead allow site operators to designate what mitigations would be necessary to protect neighboring operations personnel. CSF urged the FAA generally to defer to Federal, State, local, or private site owners and operators as the sole decision-makers responsible for determining which personnel would be considered essential to ongoing operations and what hazard mitigation measures should be observed.

Other commenters, including ULA and Virgin Galactic, commented that the FAA should designate neighboring operations personnel. These commenters argued that a site operator should not determine who qualifies as neighboring operations personnel, because it would be tantamount to the FAA's reassigning its decision-making authority on the matter. Sierra Nevada recommended that the FAA collect the neighboring operations personnel information and calculate the risk on behalf of the applicant so that the proprietary nature of workforce numbers can be maintained between competitive companies. The Aerospace Industry Association (AIA), Blue Origin, Virgin Galactic, and other commenters also raised concerns about how proprietary data would be shared after neighboring operations are designated. Virgin Galactic commented that those best suited to know which employees are required for safety, security, or critical tasks are the other launch operators, not the site operator.

As previously described, the FAA maintains that the separate risk thresholds are the appropriate protections for neighboring operations personnel, and the FAA does not agree with removing its proposed neighboring operations personnel risk thresholds and instead allowing site operators to designate what mitigations would be necessary to protect neighboring operations personnel. The FAA does not agree with ULA and Virgin Galactic that the FAA or the launch operator should determine what individuals are appropriately classified as neighboring operations personnel. Site operators are in the best position to know what operations occur on their sites and which individuals are appropriately designated as neighboring operations personnel. The FAA expects that the site operator (*i.e.,* an operator of a Federal site or FAA-licensed launch or reentry site) would work with operators of neighboring sites to identify these personnel because the site operator is in the best position to identify which personnel are required to perform safety, security, or critical tasks at the launch site. The site operator has a formal relationship with all operators on its site and has an interest in enabling continued and unimpeded operations amongst its tenants. At Federal sites, the site operator already fulfills this function, and thus enabling neighboring operations personnel does not impose any additional costs on the site operator. The designation of neighboring operations personnel is optional for FAA-licensed or exclusive use site operators. The FAA will monitor a launch site operator's designation and vehicle operator's implementation of neighboring operations personnel to ensure the appropriateness of these designations, thereby retaining its authority to determine which individuals are properly characterized as neighboring operations personnel.

Further, site operators are best positioned to adjudicate between tenants, to coordinate acceptable numbers of neighboring operations personnel during licensed operations, and to protect their tenants' proprietary information and furnish the necessary information to the licensed operator. The FAA expects that the coordination of the necessary data transfer will be collaborative between the licensed operator, the site operator, and the neighboring operators. Neighboring operators have the option of removing their personnel during the flight of a neighboring flight or reentry. As discussed above, neighboring operators have the option of discussing with the site operator which personnel they believe need to remain present in order to maintain safety, security, or other critical tasks. The accommodation of neighboring operations personnel through the risk thresholds benefits the launch or reentry operator by reducing the possibility that their presence without evacuation could result in a violation of the public risk criteria. It also benefits the neighboring operators to allow safety, security, or critical tasks to continue in cases where the site operator might otherwise require evacuation of personnel. Hence, the FAA believes that generally, as is current practice at Federal sites, neighboring operations personnel can be accommodated with little direct intervention by the FAA.

Blue Origin, CSF, and SpaceX all commented that the neighboring operations personnel provisions should apply to exclusive-use or private sites. Blue Origin asked whether the FAA intended to exclude such sites from its proposal because, although these are sites that the FAA does not license, launch and reentry activities at these sites can cause disruptions to non-licensed neighboring activities, such as developmental or test programs.

The FAA does not license exclusive-use sites, but it does license launch and reentry activities that occur at exclusive-use sites. The FAA does not anticipate that many exclusive-use sites would have personnel within a launch or reentry site, or an adjacent launch or reentry site, that qualify as neighboring

operations personnel. Nevertheless, the FAA may accept the designation of neighboring operations personnel at an exclusive-use site if they are designated by the licensed vehicle operator that operates the site. Such designations will only apply to members of the public located within the site or an adjacent launch or reentry site who are not associated with the specific hazardous licensed or permitted operation being conducted, but who are required to perform safety, security, or critical tasks at the site and are notified of the operation. This approach is accommodated by the proposed regulations without change.

The FAA recognizes that there are activities that currently take place at launch sites that are not explicitly associated with launch or reentry operations. For example, payload processing typically occurs at launch sites. The Reagan Test Site at Kwajalein also has facilities that are essential for tracking objects in space. The U.S. Navy has a presence at Cape Canaveral Air Force Station (CCAFS). These activities may sometimes require critical personnel to remain on site during neighboring launch activities to ensure the continuation of operations. While the FAA envisioned primarily facilitating launch operations by proposing a carve out for neighboring operations personnel, it will allow other personnel conducting non-licensed activities on a launch or reentry site or an adjacent launch or reentry site to qualify as neighboring operations personnel as long as they meet the criteria enumerated in the definition.

ALPA and Space Florida questioned whether the neighboring operations personnel provisions would apply at joint spaceport/airport facilities to allow airport staff to stay in the hazard area or clear zone based on risk assessments during licensed space operations. In the NPRM, the FAA took into account that neighboring operations personnel are more likely than the rest of the public to be specially trained and prepared to respond to hazards present at a launch or reentry site. The USAF and NASA definitions specify that these personnel are either trained in mitigation techniques or accompanied by a properly trained escort. However, the FAA did not require that neighboring operations personnel be trained or accompanied by a trained escort because such a requirement would be burdensome, and training is not necessary to justify the slight increase in risk allowed for workers performing safety, security, or critical tasks. Although in developing the NPRM, the FAA did not contemplate airport personnel at co-located sites as neighboring operations personnel, the proposed definition did not preclude the possibility. In response to commenters, the FAA finalizes the definition of ''neighboring operations personnel'' as proposed, and agrees that the definition may include airport personnel working at a launch site.

Many commenters expressed concerns about the impact of designating neighboring operations personnel on the MPL calculation and the associated financial responsibility requirements. Northrup Grumman, Sierra Nevada, SpaceX, and ULA all commented that the inclusion of neighboring operations personnel would likely raise MPL, even at the proposed lower threshold in the NPRM. CSF, Space Florida, and SpaceX requested that neighboring operations personnel should be excluded from MPL calculations via waivers of liability.

Section 50914(c) of title 51 of the U.S. Code states that the Secretary of Transportation shall determine the maximum probable losses for which a licensee must obtain liability insurance or demonstrate financial responsibility. This amount must include the maximum probable loss from claims by, in relevant part, third parties. 51 U.S.C. 50914(a)(1)(A). Neighboring operations personnel are third parties under chapter 509 of title 51.[51] Therefore, the FAA must include neighboring operations personnel in its MPL calculations.

The FAA agrees with the comments that MPL calculations could be affected by the designation of neighboring operations personnel because the proposed rule allowed more people to stay inside the 1×10^{-5} probability of casualty hazard area. While the FAA must include neighboring operations personnel in the MPL calculation, it does not expect the inclusion to affect materially the MPL amount. This expectation is based on the adoption in the proposed rule, for the purpose of determining MPL, of setting the threshold for neighboring operations personnel at the same threshold for losses to government property and involved government personnel. The MPL will determine losses to property and personnel of neighboring operators that have a probability of occurrence of no less than one in one hundred thousand (1×10^{-5}), instead of the more stringent requirement of one in ten million (1×10^{-7}) used for other third party losses. This threshold is appropriate for neighboring operations personnel because, unlike other third parties, except for involved government personnel, the presence of neighboring operations personnel at a launch or reentry site is necessary either for security reasons or to avoid the disruption of co-located activities at neighboring sites. The MPL methodology captures catastrophic events that, while extremely unlikely, still fall within the probability threshold.

The FAA's examination of past MPL determinations gives it confidence that these other events will generally drive MPL amounts more than the limited presence of neighboring operations personnel.[52] While additional insurance costs are expected to be minimal, these minimal cost burdens are more appropriately placed on the launch or reentry operator creating the hazards, rather than the neighboring operator who otherwise must halt its operation. The FAA notes, however, that these regulations do not prevent a launch operator from entering into an agreement with a neighboring operator to recover costs as a result of any increase in the required amount of third party liability insurance due to the presence of neighboring operations personnel. Should a launch operator choose to enter into such an agreement, the launch operator would still be required to purchase insurance to cover all third parties, to include any neighboring operations personnel, and could seek reimbursement as a secondary measure. Therefore, the FAA adopts the proposal without amendment.

[51] ''Third party'' means a person except—(A) the United States Government or the Government's contractors or subcontractors involved in launch services or reentry services; (B) a licensee or transferee under this chapter; (C) a licensee's or transferee's contractors, subcontractors, or customers involved in launch services or reentry services; (D) the customer's contractors or subcontractors involved in launch services or reentry services; or (E) crew, government astronauts, or space flight participants. 51 U.S.C. 50902(26).

[52] For example, the third party MPL for an Atlas 541 launch from CCAFS is currently $164M, which accounts for an event involving 30 third party casualties based on the risk profile method. An unlicensed government launch of the same vehicle occurred with 12 people deemed neighboring operations personnel that were located within the 1×10^{-6} P_C contour. If the conditions present during that unlicensed launch were to occur under part 450, then those 12 neighboring operations personnel would be accounted for in the third party MPL calculation at the 1×10^{-5} probability threshold (instead of the current standard 1×10^{-7} threshold for third parties as explained in the previous paragraph). The presence of the 12 neighboring operations personnel does not exceed the event involving 30 third party casualties. Therefore, it is unlikely that those 12 neighboring operations personnel would lead to an increase in the MPL for the Atlas 541 under part 450.

b. High Consequence Event Protection (§ 450.101(c))

In the NPRM, the FAA proposed to expand the FAA's use of consequence criteria to protect the public from an unlikely but catastrophic event. Specifically, the FAA proposed to use conditional expected casualties (CE_C) as the quantitative metric for: (1) Determining the need for flight abort[53] as a hazard control strategy in proposed § 450.101(c); (2) setting reliability standards for an FSS required by § 450.101(c) in proposed § 450.145(a); and (3) determining when to initiate a flight abort in proposed § 450.125(c)(1) and (c)(2). The proposed use of CE_C represented the most significant change in the NPRM because it introduced a new safety criteria pertaining to low probability, high consequence events and provided a means by which an operator could demonstrate that expensive, highly reliable FSS design and testing may be unnecessary to protect public safety. As explained in the NPRM, consequence can be measured in terms of CE_C without regard to the probability of failure.

The FAA received extensive comments on this proposal and, as a result, has made significant changes in the final rule to allow for additional flexibility in measuring and mitigating high consequence events. The following subsections provide an overview of the finalized CE_C requirements in § 450.101(c), the FAA's rationale for making the change, and specific responses to comments. The FAA notes that this section of the preamble focuses on CE_C as a means to measure the potential for high consequence events under § 450.101(c). CE_C will be discussed further in the preamble sections addressing §§ 450.108 (Flight Abort) and 450.145 (Highly Reliable Flight Safety System).

i. § 450.101(c)

In the NPRM, proposed § 450.101(c) would require an operator to use flight abort as a hazard control strategy if the consequence of any reasonably foreseeable vehicle response mode, in any one-second period of flight, is greater than 1×10^{-3} CE_C for uncontrolled areas. The FAA further proposed that the requirement would apply to all phases of flight, unless otherwise agreed to by the Administrator based on the demonstrated reliability of the launch or reentry vehicle during that phase of flight. Although not specifically spelled out in the regulatory text, the FAA explained in the preamble that § 450.101(c) was designed to ensure the public was sufficiently protected against low probability, high consequence events using CE_C as a measure of the potential for high consequence events.

In the final rule, the FAA retains the use of CE_C as a quantitative criteria that an applicant may use to measure the potential for high consequence events. However, as explained in the preamble section addressing § 450.101(c)(2), the FAA revises § 450.37(b) (Equivalent Level of Safety) to allow an applicant to propose an alternative way to measure high consequence events other than by CE_C. The final rule also allows multiple ways an applicant may protect against a low probability, high consequence event in uncontrolled areas for each phase of flight in § 450.101(c)(1) through (3). As discussed in more detail later in this section, an operator sufficiently protects against a high consequence event by (1) using flight abort in accordance with § 450.108; (2) demonstrating that CE_C is below a certain threshold without any FSS; or (3) demonstrating sufficient vehicle reliability and in consideration of CE_C.[54] The FAA changes the heading of § 450.101(c) from ''Flight Abort'' in the NPRM to ''High Consequence Event Protection'' in the final rule because this section allows an operator in certain circumstances to use a method other than flight abort to protect against high consequence events.

Multiple commenters, including CSF, Sierra Nevada, and SpaceX, stated that the NPRM requirements in § 450.101(c) were too prescriptive and objected to the lack of an explicit provision allowing an applicant to propose another approach to address a high consequence event, absent a waiver. The FAA agrees that the final rule should provide additional flexibility and discusses those changes in more detail later in this section.

Multiple commenters, including CSF and Virgin Galactic, indicated that the E_C collective risk criteria alone should be enough to establish the need for an FSS, the reliability of the FSS, and when an FSS would be required to be activated to ensure public safety.[55] The FAA finds that the use of collective risk through analyses of E_C and individual risk through analysis of Probability of Casualty (P_C) is inherently inadequate to establish sufficient protection against low probability, high consequence events during launch and reentry operations. Whereas P_C limits the maximum risk to an individual and E_C limits the average outcome in terms of casualties in a group of people, both P_C and E_C are indifferent to the risk of events that involve multiple casualties. This indifference means that, if the risk of a potential event that could result in a high number of casualties is low enough, the P_C and E_C criteria would not act to prevent that event. As explained in the NPRM, the purpose of CE_C is to protect the public from certain high consequence events, regardless of the probability of those events. Thus, the final rule includes specific provisions, such as in §§ 450.101, 450.108, and 450.145, to ensure adequate protection against low probability but high consequence events during launch and reentry.

In addition, a conditional risk assessment ensures adequate mitigation measures are in place to protect against a low probability, high consequence event in circumstances in which E_C and Pc may not dictate the need for mitigation. As explained in the NPRM, unlike collective risk that determines the expected casualties factoring in the probability that a dangerous event will occur, conditional risk determines the expected casualties assuming the dangerous event will occur.[56] This assumption means that using E_C alone may result in a lack of mitigations, such as flight abort capability and preparedness, for certain high consequence events because the low probability of occurrence would translate into an E_C below the 1×10^{-4} limit. Conversely, using a conditional risk assessment ensures that, if a high consequence event is reasonably foreseeable, such as an incorrect azimuth at lift-off, then an operator will have a mitigation in place to prevent that event from producing catastrophic results. This result is assured because the decision to activate an FSS is always made in response to a system failure in the operational environment, as no operator plans to implement a flight abort unless the mission objectives include an intentional test of the FSS.

[53] In the final rule, flight abort is defined as the process to limit or restrict the hazards to public health and safety, and the safety of property, presented by a launch vehicle or reentry vehicle, including any payload, while in flight by initiating and accomplishing a controlled ending to vehicle flight. Flight abort is discussed more fully in the discussion of § 450.108.

[54] A CE_C value is calculated as the mean number of casualties predicted to occur given a specified failure mode in a given time interval with a probability of 1.

[55] As proposed, § 450.101(c) simply used CE_C to determine whether flight abort would be required as a hazard control strategy. Other proposed regulations relied on CE_C to establish FSS reliability and activation of FSS. These regulations and the response to commenters' concern with using CEC for those purposes are discussed later in the preamble.

[56] See 84 FR at 15298.

Calculating CE_C ensures an operator correctly recognizes certain system failures that may have catastrophic consequences and builds mitigations into the system to account for those failures. As such, an FSS is generally activated in the following context: (1) The vehicle is no longer performing nominally; (2) the vehicle is outside the limits of a useful mission;[57] and (3) continued flight would increase public risks in uncontrolled areas. Hence, the risk to the public associated with the decision to activate an FSS is inherently conditioned on the fact that a system failure has occurred. An operator would only identify a system failure for low probability, high consequence events if the operator used a CE_C-based analysis, rather than an E_C calculation, because a CE_C analysis assumes that the event will occur. Therefore, relying on the collective risk criteria alone would not adequately protect against low probability, high consequence events that could result in multiple public casualties.

The FAA received several comments regarding the potential for various launch operations to comply with the proposed CE_C thresholds in the NPRM. Rocket Lab USA, Inc. (''Rocket Lab'') commented that it would be ''nearly impossible'' for any orbital launch vehicle to meet the CE_C thresholds defined in the proposal and recommended the use of cumulative risk and individual risk metrics as additional or alternative means of determining the reliability required for the flight abort system. Blue Origin also stated that most, if not all operators, including those operating smaller suborbital launch vehicles in remote locations, would be forced to implement an FSS that complies with an unmodified set of USAF requirements. SpaceX recommended that the FAA gather more detail on CE_C for different launch vehicles and trajectory profiles to evaluate appropriate lower tiers of reliability.

The FAA sponsored a series of tasks, performed by ACTA, LLC (ACTA), to investigate the potential conditional risks associated with a wide array of past and foreseeable future launch operations using the best available information and tools. The study[58] provided an independent evaluation of the potential for the CE_C-related requirements in the NPRM to necessitate changes to current practice for more than a dozen missions involving large, medium, and small launch vehicles from a wide variety of sites. The results of this study demonstrate that the required reliability of an FSS for relatively small rockets depends greatly on the launch site. Specifically, the ACTA study found that a small ELV launched from Cape Canaveral or Wallops Island would need a highly reliable FSS compliant with proposed § 450.145 to meet the NPRM requirements, but that a less reliable FSS, such as an FSS compliant with proposed § 450.143, would suffice for the same vehicle launched from more remote locations, such as the Mahia Peninsula and Kodiak Island. To the extent that commenters suggested proposed § 450.101(c) would require currently licensed operators to use an FSS, the ACTA study results indicate that no changes would be required under the final rule regarding the need for an FSS for any currently licensed launch vehicle launched from a Federal launch or reentry site.[59] The ACTA study also indicates that, for operators who currently employ an FSS to meet the FAA's public risk criteria, their current practices regarding FSS reliability and activation criteria would be sufficient to demonstrate compliance with the requirements in § 450.108.

A number of commenters asserted that the proposed CE_C requirements would increase cost for operators, particularly for current RLV operators.

CE_C analysis is not mandatory. If an operator chooses to use a § 450.145 compliant FSS, it does not need to do the CE_C analysis to establish if a § 450.145 compliant FSS is necessary or if a § 450.143 compliant FSS would suffice. A CE_C analysis to establish compliant Flight Safety Limits is unnecessary if the operator chooses to demonstrate compliance with § 450.108(c)(6).

The FAA does not agree that the cost of a CE_C analysis is prohibitively expensive. The FAA provides estimates in the final Regulatory Impact Assessment of the costs of the CE_C analyses as well as estimates of cost savings on those launches that will not need an FSS.

The ACTA study calculated CE_C for a sample of licensed RLVs and the results indicate that the final rule will not require any changes regarding the FSS robustness and FSS activation criteria currently used for the operations at the Mojave Air and Space Port. The ACTA study results suggest that launches from Spaceport America would not need to use flight abort as a hazard control strategy to meet the CE_C requirements in the final rule. Thus, the ACTA study suggests the final rule could facilitate a reduction in costs for RLV launches from non-Federal launch sites for current part 431 licenses that include flight abort as a hazard control strategy. Ultimately, the ACTA study indicates that CE_C will not drive a requirement for flight abort for currently licensed RLVs operating from non-Federal sites and is therefore not expected to drive costs for RLV operators. In the final Regulatory Impact Analysis, the FAA discusses in detail estimated voluntary costs to perform CE_C analyses as well as cost savings that result when an FSS is not required.

Several commenters, including CSF, Rocket Lab, Sierra Nevada, SpaceX, and an individual commenter, expressed a need for clarification of acceptable methodologies to compute CE_C. CSF and Sierra Nevada commented that there are no publicly available methodologies or background for conducting CE_C analysis. CSF noted that the CE_C analysis is computationally intensive and approved risk analysis tools and input data were not readily available. SpaceX stated it needed guidance on several specific technical issues on the computation of CE_C. Rocket Lab stated that, without standardized methods and input data, results would vary widely.

The FAA notes that CE_C is inherent in the calculation of E_C for launch or reentry operations. There are extensive guidance documents available currently that explain methodologies that can be used to compute E_C and, as a byproduct, CE_C as well.[60] The FAA is aware of at least one operator that has used these guidelines to develop and implement its own safety analysis tools to demonstrate

[57] Limits of a useful mission are defined in the final rule as the trajectory data or other parameters that bound the performance of a useful mission, including flight azimuth limits. This concept is discussed in greater detail in § 450.119.

[58] The report can be found in docket number FAA–2019–0229.

[59] The ACTA study made four notable conclusions:

1. For two current launch vehicles launched from outside the continential US, the 1×10^{-3} CE_C threshold is not exceeded. Thus, part 450 will not require an FSS for either of these two launches, yet both are designed to employ an FSS (as required by part 417).

2. For ten launch vehicles launched from within the continential US9, the part 450 CE_C requirements are consistent with current practice, where part 417 requires the highly reliable FSS.

3. For two piloted launch vehicles, one would require no changes, and the other would require no FSS although a flight abort capability is currently employed under part 431.

4. One current reentry poses CE_C well above the 1×10^{-2} threshold. Thus, under part 450 this reentry operation would either need to be modified to reduce the consequence of failure modes that would result in an intact impact, or be granted a waiver.

[60] *See e.g.,* the FAA Flight Safety Analysis Handbook v 1.0, 2009 and the Range Commanders Council Risk Committee of the Range Safety Group, *Common Risk Criteria for National Test Ranges—Supplement,* RCC 321–20, White Sands Missile Range, New Mexico, 2020.

compliance with the current public risk criteria under part 417. Some tools have already been modified to compute CE_C with only a few hours of effort. Even so, the FAA remains dedicated to improving the guidance materials available to applicants and plans to provide additional advisory materials to explain acceptable safety analysis methods, including those that address any unique aspects of CE_C computations.

Sierra Nevada commented that CE_C analysis was not a widely accepted practice, nor had it been subject to rigorous testing, and it was not ready to be implemented. In response, the FAA notes that RCC 321 Standard and Supplement has included conditional risk standards and guidelines since 2010. Moreover, CE_C analysis has been used to help inform important decisions regarding the safety of commercial space transportation operations since 2016, when the FAA first cited CE_C as part of a formal waiver evaluation.[61] As noted in the NPRM preamble, in granting these waivers, the FAA has adopted the conditional risk management approach, noting that the predicted consequence was below a threshold of 1×10^{-2} CE_C.[62] The FAA further stated in the preamble that measuring the consequence from reasonably foreseeable, albeit unlikely, failures is an appropriate metric to assess prudent mitigations of risks to public health and safety and the safety of property. In recent years, the USAF has also used CE_C analyses to establish appropriate FSS activation criteria for launch operations from both CCAFS and VAFB. Most recently, the FAA considered the results of CE_C analyses in granting waivers to the debris containment requirements in § 417.213(a) and (d) that enabled the SAOCOM–1B mission to be conducted safely.

Several commenters, including CSF, Sierra Nevada, and SpaceX, recommended that the proposed CE_C-related requirements be moved to a guidance document as an accepted means of compliance to a more performance-based regulation to preserve flexibility. CSF stated that, at a minimum, the quantitative criteria should be moved to a guidance document.

The FAA considered replacing the proposed quantitative CE_C criteria with a qualitative standard and moving the quantitative criteria to a guidance document as one acceptable means of compliance. However, the FAA finds that a qualitative approach to determine the three key CE_C-related issues (*i.e.,* the need for flight abort with a reliable FSS as a hazard control strategy, the reliability standards for any required FSS, and the criteria for activation of an FSS) would lack regulatory clarity necessary to ensure a consistent level of public protection, given the wide variety of launch and reentry operations. As noted by Rocket Lab and other commenters, even the results of quantitative high consequence event assessments can vary significantly from operator to operator without standardized methods and input data.

Although quantitative CE_C is retained in the final rule, the FAA adds flexibility in both the manner in which a high consequence may be measured and the manner in which an operator can sufficiently protect against a high consequence event. First, in the NPRM, ELOS would not have been allowed for the requirements in § 450.101. As noted in the discussion of ELOS earlier in the preamble, the FAA has revised § 450.37 in the final rule to allow operators to use ELOS to measure a high consequence event under § 450.101(c)(2). Second, § 450.101(c)(2) permits an operator whose CE_C is greater than 1×10^{-3} to propose safeguards other than flight abort to reduce the CE_C below 1×10^{-3}. These revisions are discussed in greater detail later in this section.

Virgin Galactic recommended the FAA provide a definition of CE_C. In addition, Virgin Galactic commented that, in the NPRM preamble, CE_C was described using the phrase, ''without regard to the probability of failure,'' which appeared to Virgin Galactic to translate to ''assume 100% failure probability.'' Virgin Galactic recommended the FAA use the terminology ''assuming the failure will occur'' and clearly state the probability of failure would be 1, if that was what was intended.

The FAA does not agree that CE_C should be defined in the final rule. Rather, the preamble and associated AC (on High Consequence Event Protection) discuss in detail what the requirement entails and how to calculate CE_C. A CE_C value is calculated as the mean number of casualties predicted to occur given a specified failure mode in a given time interval with a probability of 1. As previously mentioned, there are extensive guidance documents currently available that explain methodologies that can be used to compute E_C and, as a byproduct, CE_C as well.[63] The term ''high consequence'' appears in § 417.107(a)(1)(ii), but the FAA chose not to define this term formally at this time to allow for operational flexibility. High consequence events include incidents that could involve multiple casualties, massive toxic exposures, extensive property or environmental damage, or events that jeopardize the national security or foreign policy interests of the United States.

Boeing, Lockheed Martin, Northrop Grumman, and ULA provided regulatory text recommendations for § 450.101(c) including removal of ''flight abort,'' stating that a distinction needed to be made from flight abort that was not initiated based on threat to public health and safety because not all abort systems are considered FSS.

The FAA understands that the term ''flight abort'' has been used in other U.S. Government contexts to mean something different, but the FAA finds that ''flight abort'' accurately describes the required hazard mitigations while remaining flexible as to implementation. For these reasons, the FAA will not amend the rule to remove the term ''flight abort.'' The final rule adopts the proposed definition of flight abort in § 401.7, which means the process to limit or restrict the hazards to public health and safety, and the safety of property, presented by a launch vehicle or reentry vehicle, including any payload, while in flight by initiating and accomplishing a controlled ending to vehicle flight. The final rule also adopts in § 401.7 the proposed definition of ''flight safety system,'' which means a system used to implement flight abort, for which a human can be a part of an FSS.

The FAA finds that the definition of ''flight abort'' is consistent with current practice for licensed launches and reentries. Most RLVs use some method to achieve flight abort reliably, either in the form of a pilot that can safely abort flight using system controls or an automated system to terminate thrust. Traditional FSS for ELVs are comprised of an onboard flight termination system, a ground-based command and control system, and tracking and telemetry systems. Historically, the flight safety crew monitoring the course of a vehicle would send a command to self-destruct,

[61] *See Waiver of Debris Containment Requirements for Launch.* 81 FR 1470, 1470–1472 (January 12, 2016).

[62] 84 FR 15312.

[63] The FAA notes that CE_C is inherent in the calculation of E_C because the total E_C for the operation is the sum of all E_C contributions from each failure mode and failure time, and each E_C contribution for a failure mode and failure time is the probability of failure multiplied by CE_C. Therefore, CE_C for a given failure mode and failure time can be found by dividing the E_C contribution by the probability of failure for that failure mode and failure time.

thus aborting the flight, if the vehicle crossed flight safety limits and in doing so threatened a protected area. Redundant transceivers in the launch vehicle would receive the destruct command from the ground, set off charges in the vehicle to destroy the vehicle and disperse the propellants so that an errant vehicle's hazards would not impact populated areas. While this method of flight abort through ordnance is conventional, the existing definition in § 417.3 and the definition in the final rule do not require an FSS to be destructive.

In response to commenters' concerns, the FAA finds that the definitions of ''flight abort'' and ''flight safety system'' adopted in the final rule remove any perceived confusion over the use of these terms for the purpose of FAA licensing under part 450.

ii. § 450.101(c)(1)

Section 450.101(c)(1) states that an operator must protect against a high consequence event in uncontrolled areas for each phase of flight by using flight abort as a hazard control strategy in accordance with the requirements of § 450.108. The FAA has not included the reference to the CE_C threshold of 1×10^{-3} in § 450.101(c)(1) because an operator who uses flight abort in accordance with § 450.108 has demonstrated compliance with § 450.101(c)'s requirement to protect against a high consequence event without further inquiry into CE_C beyond the requirements in § 450.108(c). This change is consistent with the concept proposed in § 450.101(c) of the NPRM that required an operator to use flight abort with a reliable FSS [64] if CE_C was greater than 1×10^{-3} for any phase of flight. Under the proposal, if an operator elected to use flight abort with an FSS that met the reliability requirements in § 450.145, the FAA would not have required the operator to calculate CE_C for the purposes of determining compliance with proposed § 450.101(c) because the operator opted into flight abort as a hazard control strategy irrespective of CE_C.

As such, in the final rule, there is no need to reference a CE_C threshold in § 450.101(c)(1) because an operator who elects to use flight abort as its hazard control strategy and complies with § 450.108 does not need to calculate CE_C (beyond the requirements in § 450.108(c) discussed later in the preamble) to determine that it has sufficiently protected against a high consequence event. Rather, use of flight abort consistent with the requirements in § 450.108 by itself demonstrates compliance with § 450.101(c).

As explained in the next two sections, operators who do not elect to use flight abort consistent with the requirements of § 450.108 must demonstrate they can protect against a high consequence event by means other than flight abort. If an operator cannot demonstrate compliance with § 450.101(c)(2)—including through ELOS—or (c)(3), the operator would be required to rely on § 450.101(c)(1) as the only remaining means to protect against a high consequence event.

iii. § 450.101(c)(2)

In the final rule, § 450.101(c)(2) states that an operator must protect against a high consequence event in uncontrolled areas for each phase of flight by ensuring the consequence of any reasonably foreseeable failure mode, in any significant period of flight, is not greater than 1×10^{-3} CE_C. As noted, proposed § 450.101(c) would have required an operator with a CE_C greater than 1×10^{-3} to use flight abort with an FSS that meets the reliability requirements of proposed § 450.145 except for a single exception explained in greater detail in the discussion of § 450.101(c)(3).

The FAA recognizes that flight abort is not the only method to protect against low probability, high consequence events. Therefore, in the final rule, § 450.101(c)(2) allows an operator with CE_C greater than 1×10^{-3} in any significant period of flight to demonstrate protection against a low probability, high consequence event through means other than flight abort. This added flexibility in the final rule allows operators to implement other safeguards that sufficiently protect against a high consequence event. For example, one company included a design feature in a system so that a launch failure during downrange overflight would result in break-up and demise and thus mitigate the risk from the potential for the capsule to survive intact to impact.

In addition, although this provision retains the quantitative CE_C threshold proposed in § 450.101(c), the FAA provides additional flexibility by modifying § 450.37 to allow applicants to propose alternative approaches that provide an equivalent level of safety, which can be approved by the FAA without a waiver. The FAA added this flexibility because it is aware of methods other than using CE_C to measure high consequence events, such as conditional risk profile. If an operator chooses to propose an alternative means of measuring a high consequence event, the FAA would expect the alternative means to account for the potential for any event that would be expected to produce multiple casualties,[65] using a method that demonstrates equivalent level of safety to a CE_C analysis. The operator must ensure that the alternative means accurately assesses that the operation would not exceed an acceptable threshold for high consequence events. In order to determine whether an alternative threshold for high consequence events is acceptable, the FAA will compare the alternative measurement to the CE_C threshold. Alternatively, the applicant would be expected to demonstrate that either the consequence of any failure during any significant period of flight is at least an order of magnitude less than the average results from a fixed-wing general aviation aircraft fatal accident.[66]

For example, the Range Commanders Council Document 321–17, ''Common Risk Criteria Standards for National Test Ranges'' (RCC 321) includes catastrophic risk protection provisions that use a ''risk profile.'' [67] In fact, the FAA currently uses a modified risk profile method to establish the insurance requirements for certain launch or reentry operations.[68] The

[64] Proposed § 450.101(c) required an operator to use fight abort with an FSS that met the reliability requirements set forth in § 450.145. The reference to reliability requirements for FSS has been moved to § 450.108(b) and will be discussed in that section of the preamble.

[65] High consequence events include incidents that could involve multiple casualties, massive toxic exposures, extensive property or environmental damage, or events that jeopardize the national security or foreign policy interests of the United States.

[66] The FAA computed this risk profile using NTSB accident data between 1982 and 2019 for fixed-wing aircraft operated under FAR parts 91, 135, and 137, excluding aircraft type certificated under part 25.

[67] RCC 321–17 defines a risk profile as ''a plot that shows the probability of N or more casualties (vertical axis) as a function of the number of casualties, N (horizontal axis),'' such that the area under a risk profile is equal to the EC. Unlike the single valued EC, risk profiles illustrate whether the collective risk is from a relatively low probability, high consequence event or from more frequent, smaller consequence outcomes.

[68] See, *e.g.,* the 2016 Report to Congress ''FAA's Development of an Updated Maximum Probable Loss Method'' in response to Public Law 114–90, Section 102. An MPL analysis must model each accident scenario as a discrete event with discrete results, *e.g.,* no casualties, exactly one casualty, two casualties, etc. Each accident scenario also has a quantitative probability of occurrence. The MPL analysis process involves simulation of many thousands of discrete accident scenarios that cover the parameter space of the problem (*i.e.,* all foreseeable accident scenarios for each and every failure time and vehicle failure mode). The predicted results of all foreseeable accident scenarios are accumulated into a histogram and the risk profile is computed as the complementary cumulative distribution. For details, see Collins, Brinkman, and Carbon paper ''Determination of

Continued

FAA understands that risk profiles are currently in use in other industries [69] and could be a useful means to quantify the probability of high consequence events associated with a wide variety of hazardous operations. However, the computation of a risk profile generally entails significantly more effort than the CE_C evaluation because a risk profile involves more sophisticated computations and additional input data. Specifically, the development of a risk profile for a launch or reentry operation would consist of an evaluation of the absolute probability of each foreseeable failure mode and the relative probability of each outcome of each failure mode in terms of the number of public casualties that could result in uncontrolled areas. The RCC 321 Supplement describes a more simplified and conservative method to screen for excessive catastrophic risk, which the FAA finds as another acceptable method to measure high consequence events.[70] In contrast, a CE_C analysis is independent of the probability of each failure mode and requires an assessment of only the average outcome of each failure mode. In addition, the FAA is publishing an AC that describes how an applicant can demonstrate compliance with § 450.101(c)(2) by showing that the conditional risk profile for its proposed launch or reentry mission is comparable with the conditional risk profile empirically derived from evidence from a set of past fixed-wing general aviation fatal accidents. Finally, the FAA recognizes that industry may develop new innovative and less burdensome methods, and therefore the final rule allows applicants to propose methods other than CE_C to measure high consequence events.

In § 450.101(c)(2), the FAA replaces the term ''one-second period of flight'' in proposed § 450.101(c) with ''significant period of flight.'' A period of flight would be significant if it is long enough for a mitigation, such as flight abort, to decrease the public risks or consequences materially from any reasonably foreseeable failure mode. The FAA makes this change because it recognizes that for some launch and reentry concepts, such as relatively slow-moving vehicles like balloons, a ''significant'' period of flight could exceed one second. In addition, the FAA foresees circumstances in which an elevated CE_C in a single second of flight would not warrant additional mitigation, such as when no additional mitigation would improve public safety meaningfully in terms of the public risks and consequences. The preamble discussion of § 450.108 contains further explanation of what constitutes a material decrease.

Finally, the final rule replaces the phrase ''any reasonably foreseeable vehicle response mode'' proposed in § 450.101(c) with ''any reasonably foreseeable failure mode'' in § 450.101(c)(2) of the final rule. The NPRM defined ''vehicle response mode'' as a mutually exclusive scenario that characterizes foreseeable combinations of vehicle trajectory and debris generation. Thus, the NPRM would have required an evaluation of CE_C for each foreseeable combination of vehicle trajectory and debris generation. By replacing the term ''vehicle response mode'' (VRM) with ''failure mode,'' the final rule is both less prescriptive and consistent with the current requirements.[71]

In the NPRM, the FAA defined a VRM as a mutually exclusive scenario that characterizes foreseeable combinations of vehicle trajectory and debris generation. As stated in the NPRM, proposed § 450.101(c) would have required, at a minimum, that an operator compute the effective casualty area and identify the population density that would be impacted for each reasonably foreseeable vehicle response mode in any one-second period of flight in terms of CE_C. The NPRM further explained that the casualty area, population density, and predicted consequence for each vehicle response mode are intermediate quantities that are necessary to demonstrate compliance with the individual and collective risk criteria currently; thus, these new requirements would not necessarily impart significant additional burden on operators.

The draft AC 450.115–1 on High Fidelity Flight Safety Analysis published for comment in conjunction with the NPRM further explained that ''VRMs are a combination of debris list and failure modes'' and provided a description of typical failure modes for launch and reentry systems, including loss of thrust, engine explosion, attitude control failure, structural failure, separation failure, guidance or navigation failure, etc. Because the final rule replaces the term ''vehicle response mode'' with ''failure mode,'' an operator is no longer required to evaluate CE_C for each foreseeable combination of failure mode and debris generation. Instead, an operator is required to evaluate CE_C for each reasonably foreseeable failure mode in any significant period of flight.[72]

Boeing suggested changing the term ''reasonably foreseeable'' to ''credible'' vehicle response modes. The FAA does not agree that the term ''reasonably foreseeable'' should be replaced by the term ''credible'' in this section. As previously noted, the term ''reasonably foreseeable'' is used in § 431.35 and commonly used in system safety. In the absence of a compelling reason to change, the FAA prefers to continue to use language consistent with previous regulations instead of introducing a new term at this time. Furthermore, the FAA finds that the term ''credible'' is prone to errors in judgment whereas the term ''reasonably foreseeable'' is more readily discerned by analysis (*e.g.,* fault trees).

iv. § 450.101(c)(3)

In the NPRM, in instances in which CE_C was greater than 1×10^{-3}, proposed § 450.101(c) provided relief from the use of flight abort if the Administrator agreed that flight abort was not necessary based on the demonstrated reliability of the launch or reentry vehicle during a phase of flight. The NPRM preamble cited the flight of a certificated aircraft carrying a rocket to a drop point as an example of a phase of flight when the use of an FSS would likely not be necessary, even though the CEC could be above the threshold because the aircraft would have demonstrated reliability.

While the final rule retains the ''demonstrated reliability concept'' proposed in the § 450.101(c) of the

Maximum Probable Loss'' presented at 2nd IAASS conference in Chicago, May 2007.

[69] For example, Santa Barbara County, California (where Vandenberg AFB is located) uses risk profiles as part of their management of public casualty risks from activities that involve significant quantities of hazardous materials as explained in the County of Santa Barbara, Planning and Development, Environmental Thresholds and Guidelines Manual, October 2008. Several European countries, including the UK and Netherlands, use risk profiles as part of their governance of a wide array of industries that pose public risks.

[70] For example, the catastrophic risk averse pseudo-E_C contribution from people in ships may be computed using a standard E_C computation but replacing the number of casualties contributed by type of ship, N, with N raised to an exponent of 1.5.

[71] As part of the demonstration required under § 431.35(c), a part 431 applicant is required in § 431.35(d)(4) to identify and describe all safety-critical failure modes and their consequences.

[72] As an example of the distinction between ''vehicle response mode'' in the NPRM and ''reasonably foreseeable failure mode,'' in the final rule consider, a loss of thrust (LoT) failure mode. Under the NPRM, LoT failure mode would need to be accounted for by three VRMs: A LoT resulting in an intact impact, a LoT resulting in aerodynamic break-up, and a LoT resulting in explosion due to FSS activation. Under the NPRM's proposal, the operator would have been required to compute CE_C for three VRMs associated with LoT, but under the same circumstances the final rule will require only one CE_C for the LoT. The final rule CE_C for LoT will equal the average CE_C for the three VRMs that the NPRM would have required.

NPRM, it has been revised and relocated to § 450.101(c)(3). Section 450.101(c)(3) of the final rule states that an operator must protect against a high consequence event in uncontrolled areas for each phase of flight by establishing the launch or reentry vehicle has sufficient demonstrated reliability based on the CE_C during that phase of flight.

Because demonstrated reliability provides an alternative to flight abort when CE_C is greater than 1×10^{-3}, it is appropriate to assess it consistent with the approach to flight abort and FSS reliability, which depends on CE_C with a 1×10^{-2} threshold.[73] Notably, the ARC recommended that the need for an FSS should be determined by taking into account population density, the realm of reasonably foreseeable failures, trajectory, size, and explosive capabilities of the vehicle. CE_C accounts for all those factors. As such, the CE_C computed for a proposed operation is inherent in determining whether the vehicle has sufficient demonstrated reliability to protect against a high consequence event. This revision informs operators on the approach the FAA will take in determining whether the launch or reentry vehicle has sufficient demonstrated reliability to protect against a high consequence event.

More specifically, the FAA will use the demonstrated reliability and average ground consequence results from fatal accidents involving U.S. civil aviation aircraft with standard airworthiness certificates to establish what constitutes sufficient demonstrated reliability to protect against a high consequence event based on CE_C. For example, a carrier vehicle with a CE_C near 1×10^{-2} in a given phase of flight would need to have demonstrated reliability during that phase of flight on par with the subset of fixed-wing general aviation aircraft that empirically produce CE_F[74] near 1×10^{-2}. However, the same carrier vehicle operated in a more densely populated area could have a CE_C near 1 in a given phase of flight and thus would need to have demonstrated reliability during that phase of flight on par with commercial transport aircraft that empirically produce CE_F near 1.[75] This approach is consistent with the longstanding and often cited principle that launch and reentry should be no more hazardous to the public than over-flight of conventional aircraft, as explained in the NPRM preamble.

The FAA received multiple comments seeking clarification of the provision to use demonstrated reliability as a means to ensure a low probability, high consequence event is sufficiently mitigated. In the NPRM, the FAA noted that ''demonstrated reliability'' in this context refers to statistically valid probability of failure estimates based on the outcomes of all previous flights of the vehicle or stage. For example, a probability of failure analysis that complies with § 450.131 will provide a valid basis to establish the demonstrated reliability of a launch or reentry vehicle in a given phase of flight. That concept is also applicable to § 450.101(c)(3) of the final rule. Furthermore, the FAA will consider the magnitude of the high consequence event in determining what level of reliability will be sufficient to ensure that the high consequence event is mitigated. One way to show that a vehicle has demonstrated reliability during a phase of flight is to show that it has demonstrated reliability during that phase of flight equivalent to a specific aircraft type or an average aircraft of similar size and performance characteristics with a standard airworthiness certificate.[76] The FAA notes an average aircraft of similar size would have less uncertainty than a specific type aircraft because there would be more data collected for an average aircraft, and thus the demonstrated reliability of an average aircraft could be more readily characterized with a reasonable level of confidence. Furthermore, both a specific aircraft type and an average aircraft with a standard airworthiness certificate generally will not need additional flight abort capability unless the addition of the rocket substantially increased the risk from a high consequence event. However, aside from some carrier aircraft used as a component of a launch vehicle, no launch vehicle, including U.S. government owned and operated vehicles, to date has a significant amount of historical flights to ensure sufficient protection against a high consequence event based on demonstrated reliability in accordance with § 450.101(c)(3).

c. Critical Asset and Critical Payload Protection

Commercial space transportation operations occur increasingly in close proximity to critical assets. In order to maintain the continuing functionality of critical assets, the FAA proposed to define ''critical assets'' in § 401.5 (§ 401.7 in the final rule) and add a quantitative risk criterion (1×10^{-3}) for the protection of critical assets during launch or reentry activity under § 450.101 in the NPRM.

In the final rule, the FAA adopts the ''critical asset'' definition in § 401.7 with modification, as discussed below. The FAA adopts the risk criterion as proposed but removes the requirement for operators to assess the risks to critical assets in preparing a flight hazard analysis (proposed § 450.109(a)(3)(ii)), debris analysis (proposed § 450.121(c)(1) and (c)(2)), debris risk analysis (§ 450.135), and ground hazard analysis (§ 450.185(c)). Instead, in accordance with § 450.101(a)(4)(iii) and (b)(4)(iii), either the FAA or a Federal launch or reentry site operator will determine whether the proposed activity would expose critical assets to a risk of loss of functionality that exceeds the risk criterion in § 450.101(a)(4) or (b)(4) and convey any necessary constraints to the operator. The operator must receive confirmation from the FAA or Federal launch or reentry site operator that the risk to critical assets satisfies the risk criterion in § 450.101(a)(4) or (b)(4) prior to launch or reentry. The FAA anticipates that most critical assets for a given launch site will be known when an applicant begins pre-application consultation. Current practice demonstrates that the critical asset evaluation can often be completed using preliminary flight safety data (during pre-application or during the license evaluation), sufficient to show critical assets risks are acceptable. Where the prevailing weather conditions are important to the critical asset risks, an assessment is performed either close to or on the day-of-launch.

[73] In the proposal and the final rule, the FAA uses CE_C not only as a basis to determine whether flight abort is required but also as a basis to determine the appropriate FSS requirements. As noted, FSS requirements are discussed later in the preamble.

[74] CE_F represents conditional expected fatalities and is used to measure the mean number of fatalities predicted to occur given an event with a probability of 1. As noted in the NPRM, the FAA found that about one ground fatality resulted on average from one-hundred fatal accidents involving US aircraft operated under part 91 between 1984 and 2013 based on NTSB data. A comparison of CE_C to CE_F is appropriate here because the CE_F values cited here are empirical results from aviation accidents, whereas the CE_C values used here are the results of physics-based computer simulations for launch and reentry operations. In addition, the differences between aviation and space operations justify some margin in the tolerability of the conditional risks predicted for space transportation operations.

[75] As noted in the NPRM, the FAA found that about one ground fatality resulted on average from a fatal accident involving US aircraft operated under part 121 between 1984 and 2013 based on NTSB data.

[76] As discussed in the preamble section on Hybrid Vehicles, the FAA agreed with a comment that the FAA should not similarly find that an aircraft with only an experimental airworthiness certificate (EAC) would satisfy the demonstrated reliability standard. An aircraft with an EAC may demonstrate sufficient reliability through the use of a rigorous flight test program or numerous flights without a failure as defined in § 450.131.

In the final rule, the FAA also clarified in § 450.101(a)(4)(ii) and (b)(4)(ii) the Federal procedure by which critical assets will be identified. To identify critical assets, the FAA will consult with relevant Federal agencies, and each agency will identify, for purposes of part 450, any critical assets that the agency owns or otherwise depends on. The FAA will accept any identification by the Secretary of Defense that an asset is critical to national security. For critical assets identified by other relevant Federal agencies, such as NASA, the FAA will work with the agency to ensure its identification of critical assets aligns with the requirements of part 450.

The FAA also adds in § 450.165(a)(5) (Flight Commit Criteria) a requirement that operators' flight commit criteria include confirmation from the FAA that the risk to critical assets satisfies the requirements of § 450.101(a)(4) or (b)(4). Lastly, the FAA sought comments in the NPRM on its proposal to add to the final rule a definition for ''critical payload'' and a requirement that the probability of loss of functionality not exceed 1×10^{-4} for each critical payload. The FAA adopts the proposed definition and requirement in the final rule.

In the final rule, the FAA adopts the risk criterion proposed for critical assets in the NPRM. The property protection criteria in § 450.101(a)(4) and (b)(4) are consistent with current practice at Federal sites. Launch operations from NASA-operated ranges are currently subject to requirements that limit the probability of debris impact to less than or equal to 1×10^{-3} for designated assets. The USAF requirement in AFI 91–202 and the Guidance Memorandum to AFSPCI 13–610 match those proposed by the FAA. The FAA also adopts its proposal to extend the protection of critical assets to non-Federal launch or reentry sites because the protection of critical assets is necessary irrespective of the location of the launch.

As proposed in the NPRM, a critical asset is an asset that is essential to the national interests of the United States. The proposed definition noted that critical assets include property, facilities, or infrastructure necessary to maintain national defense, or assured access to space for national priority missions.[77] In the final rule, the FAA replaces ''necessary to maintain national defense'' with ''necessary for national security'' to be more consistent with the rest of 14 CFR Chapter III. The FAA also adds that critical assets may include those necessary for high priority civil space purposes, for clarity. An example of this would be infrastructure necessary to support launch and reentry services to deliver cargo to and from the International Space Station.

CSF and SpaceX noted that critical assets are frequently located on or near Federal launch or reentry sites, and that the current practice at Federal launch or reentry sites is to allow a site operator or neighboring operator to waive the critical asset requirement for its own facilities. The commenters requested the regulation provide a similar allowance to reduce the frequency with which operators would need to apply for waivers. SpaceX recommended revising the regulation to allow for the waiver of an operator's own designated critical assets, as well as assets that may be shared or used as common infrastructure at a range.

The FAA acknowledges that critical assets located on a launch site, including the launch facility itself, may be exposed to a risk of loss of functionality that exceeds 1×10^{-3} during launch activity. The FAA finds that it would be burdensome to require a waiver of the critical asset protection requirement when a launch site operated by the U.S. Government or licensed by the FAA allows an operator to use its facility for launch. Therefore, the FAA revises § 450.101(b)(4) to not apply the critical asset risk criteria to property, facilities, or infrastructure supporting the launch that are within the public area distance, as defined in part 420 Appendix E, Tables E1 and E2 or associated formulae, of the vehicle's launch point.[78] Assets that fall within this exception, located at § 450.101(b)(4)(v), are exempt from the critical asset protection requirements in § 450.101(a)(4)(i) and (b)(4)(ii) for a licensed launch.

Assets excepted from risk criteria are determined by the required distance to a public area specified in Table E–1 or E–2 or associated formulae in Appendix E to part 420, using the quantities of propellants or other explosives on the vehicle, including any payloads. These distances are equivalent to Inhabited Building Distances commonly observed on Federal launch or reentry sites to protect critical assets. The exception limits consideration to quantities of propellants on the vehicle, including any payloads. Any critical assets within this area that are not supporting the activity would be subject to the risk criteria. This exclusion would be applicable from ignition or at the first movement that initiates flight, whichever occurs earlier, and end when the launch ends.

The FAA received many comments on the definition of ''critical asset.'' ULA expressed support for the proposed definition. A number of commenters, including CSF and Sierra Nevada, asked who will determine whether an asset is ''critical'' and how the determination would be communicated to an applicant. Virgin Galactic commented that the proposed definition is vague and did not provide enough information to the operator to ensure protection of critical assets because the definition could potentially apply to all property at a Federal site. Virgin Orbit commented that the lack of clarity could result in Federal agencies incorrectly concluding their assets were protected. CSF and SpaceX commented that there was no limit on the number or location of assets for which an operator would need to perform a risk analysis. CSF and SpaceX recommended the definition of ''critical asset'' be limited to U.S. Government assets located on Federal property that the Secretary of Defense or Administrator of NASA determines to be essential to the national interests of the United States. Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended critical assets be defined as assets for which incapacitation or destruction would have a very serious, debilitating effect on national defense, or assured access to space for national priority missions. The commenters noted this change would be consistent with the definition in DCMA–MAN 3401–02, Defense Industrial Base Critical Asset Identification and Prioritization. Furthermore, the commenters stated that classification as a critical asset should be determined by minimum criteria (not specified in the comment) and an assessment by the asset owner.

The FAA disagrees that the definition of ''critical asset'' is vague or overbroad. The proposed definition, along with the examples provided in the NPRM preamble, bound the scope of critical assets appropriately and provide sufficient clarity for operators. Only those facilities, property, or infrastructure that are necessary for national security purposes, high priority civil space purposes, or assured access to space for national priority missions will be deemed critical assets under § 401.7. Critical assets will also include certain military, intelligence, and civil payloads, including essential infrastructure when directly supporting the payload at the launch site. The FAA provided several examples of critical

[77] ''Property'' includes launch vehicles, reentry vehicles, and payloads.

[78] Part 420 defines public area distance as ''the minimum distance permitted between a public area and an explosive hazard facility.''

assets in the NPRM. Critical assets include assets that, if incapacitated or destroyed, would have a serious, debilitating effect on national security or assured access to space for national security missions, but the FAA disagrees that the additional words proposed by the commenters add clarity beyond the proposed definition.

Virgin Orbit's concern that Federal agency may assume incorrectly that a critical asset was protected is alleviated by the fact that critical assets will be identified by Federal agencies that own or otherwise depend on assets that are essential to the national interests of the United States. The FAA will work with operators to identify any measures that operators may need to undertake in order to protect critical assets to the level required by § 450.101(a)(4) or (b)(4).

With respect to the concern that Federal agencies might be inclined to overestimate their assets as critical, the FAA does not find that experience at Federal launch or reentry sites warrants such a concern. In fact, discussions with safety officials at CCAFS indicate that the risk to critical assets or critical payloads has rarely exceeded the risk thresholds adopted by the FAA. Federal launch or reentry sites have not excessively designated assets as critical, nor have they imposed significant restrictions on launch activity. When approving the use of their sites for launch activity, Federal sites consider the potential of launch activities endangering other facilities. Similarly, other users of the site do not knowingly put their assets at risk. The FAA maintains that similar considerations would hold at non-Federal sites. Non-Federal launch or reentry site operators will consider the siting and scheduling of activities to avoid one user's activity threatening the assets of another user. Occasionally, delays in one site user's activity may necessitate rescheduling another user's activity. Otherwise, a new activity that was not anticipated when siting decisions were made, such as fly-back of a stage, is most likely to expose a critical asset to risk exceeding the criterion.

Only property, facilities, or infrastructure located close to the launch point might typically be expected to exceed the criteria, and those assets are generally associated with the subject launch operation. As discussed in this section, the FAA revised § 450.101(a)(4) to eliminate the need to seek waivers for assets located within the immediate vicinity of a launch point during the launch. Although many of these assets may be critical, meeting the critical asset criteria would be impractical during a launch from the particular launch point. Hence, assets located within the public area distance required by part 420 during a licensed launch are exempt from the critical asset protection requirements in § 450.101(a)(4)(i) and (b)(4)(i). As such, the FAA anticipates that operations exceeding the risk criteria for critical assets will continue to be few, resulting in minimal restrictions on launch activity.

The FAA maintains that establishing explicit risk criteria for protecting critical assets in this final rule provides a level of certainty. Launch and reentry site operators will have a metric to determine what activities are appropriate for various locations on their sites. Either the FAA or Federal site will perform any necessary analysis, and will provide written confirmation to the operator that the criteria in § 450.101(a)(4) or (b)(4) have been met. If the risk to critical assets posed by the proposed activity exceeds the criteria in § 450.101(a)(4) or (b)(4), then the FAA will work with asset owners and operators to reach solutions that allow operations without sacrificing safety to the critical assets or mission objectives.

The FAA does not adopt the suggestion by CSF and SpaceX to limit critical assets to U.S. Government assets located on Federal property that the Secretary of Defense or the Administrator of NASA determines to be essential to the national interests of the United States. Federal entities other than the DOD and NASA might own or otherwise depend on critical assets, such as NOAA. Thus, it would be inappropriate to assign the determination of critical assets to only these agencies. However, as noted earlier, critical assets will be identified by Federal agencies, such as DOD and NASA, which own or otherwise depend on assets that are essential to the national interests of the United States, and the FAA will accept any identification by the Secretary of Defense that an asset is critical to national security. Note also that the FAA does not limit the definition of ''critical assets'' to assets that are owned or located on property owned by the U.S. Government. As stated in the NPRM, the FAA extended the protection of critical assets to non-Federal launch or reentry sites, which previously had no regulatory assurance of protection from loss of functionality of critical assets. The FAA maintains the same safety standards for critical assets for launches that take place on a Federal launch or reentry site as those that take place on a non-Federal launch or reentry site, some of which are dual use, supporting both commercial and military operations. Similarly, as explained in the NPRM the FAA will deem any commercial property that meets the definition set forth in § 401.7 a critical asset.

Blue Origin asked the FAA to provide examples of critical infrastructure. The FAA notes that in the past, the launch complexes at CCAFS that support Atlas V and Delta IV launches have been designated as critical assets because they support missions essential to the interests of the United States.

An individual commenter recommended the FAA define categories of national security interests, including cybersecurity, security controls, and classification level. Although these are important national interests, they are not by themselves critical assets, and the FAA does not find it necessary to add categories of national security interests.

Airlines for America (A4A) recommended the FAA extend the safety protections of critical assets to include critical aviation infrastructure, including airports. The FAA notes that the definition of ''critical asset'' does not preclude aviation infrastructure from being a critical asset. More generally, the definition of ''critical asset'' can include non-space associated assets, including those not located at or adjacent to a launch or reentry site. However, the criterion for loss of functionality likely limits aviation infrastructure assets from being subject to protection.

Commenters were divided on the need for critical asset protection. ULA acknowledged the need for protection of critical assets. Virgin Galactic questioned whether the FAA's proposed critical asset requirements were within the FAA's statutory authority, as title 51 did not reference ''national interests'' or ''national priority missions.'' Blue Origin acknowledged the FAA's statutory authority to protect property and asked the FAA to explain how it will interpret and implement this authority. An individual commenter stated only assets directly related to national security should be given heightened protection. CSF, Spaceport Strategies, LLC (Spaceport Strategies), and SpaceX commented that critical assets were already protected by current requirements at Federal launch and reentry sites, rendering the FAA's regulations duplicative. SpaceX added that NASA or DOD may not agree with the FAA's proposed critical asset requirements, which may lead to further duplication of requirements at Federal sites.

The FAA has the authority to protect critical assets. The Commercial Space Launch Act authorizes the DOT, and the FAA by delegation, to protect public health and safety, safety of property, and national security and foreign policy interests of the United States. In carrying out its responsibility to protect property, the FAA has established a quantitative requirement to protect assets that are essential to the national interests of the United States. As noted in the NPRM, national interests go beyond national security and include infrastructure such as that used to support high priority NASA missions. As noted earlier, an example of this would be infrastructure necessary to support launch and reentry services to deliver cargo to and from the International Space Station.

As CSF, Spaceport Strategies, and SpaceX noted, the FAA's critical asset requirements codify current practice at Federal launch or reentry sites, but also extend the same regulatory protection for launch or reentry activity at non-Federal launch or reentry sites. Although critical assets are primarily located on Federal launch or reentry sites at this time, the FAA foresees increased commercial space activity at non-Federal sites that may result in the presence of critical assets at those sites. In licensing commercial launch or reentry activities, the FAA safeguards critical assets—which by definition are essential to the national interests of the United States—irrespective of their location.

The FAA does not find the critical asset requirements to be unnecessarily duplicative of requirements at Federal launch or reentry sites. As discussed in the NPRM, the FAA proposed these requirements to further the goal of common standards for launches from any U.S. launch or reentry site, Federal or non-Federal. Inclusion of critical asset protection in FAA regulations aligns FAA licensing with Federal launch or reentry site requirements and removes duplication of effort. The FAA closely coordinated the critical asset requirements with the CSWG and its interagency partners, including NASA and DOD. As a result of this coordination, the FAA anticipates that the methodologies used by the Federal launch or reentry sites will satisfy the FAA's requirements for critical asset protection.

Many commenters, including AIA, Blue Origin, Boeing, CSF, Lockheed Martin, Northrop Grumman, Sierra Nevada, SpaceX, Virgin Galactic, and ULA raised concerns about how an applicant would obtain the information necessary to perform the proposed critical asset analysis, including proprietary or confidential information. CSF and SpaceX noted the same data should be provided to all operators to ensure the fair and unbiased application of this regulation. Sierra Nevada recommended the FAA provide a method of acceptable means of compliance that does not require a commercial company to contract with DOD to complete this analysis. Alternatively, Sierra Nevada recommended the FAA provide the analysis instead of the applicant. CSF and SpaceX also recommended the FAA publish an AC that would provide an acceptable means for analyzing critical assets, describe how the FAA would obtain a definitive list of critical assets, and how the FAA would provide operators the data necessary to conduct the analysis. Blue Origin stated that, by requiring information that includes data from other entities, the FAA would become responsible for facilitating acquisition of this data or would risk implementing a requirement that would not be possible to comply with or a requirement that would establish a sole source provider of a service.

The FAA acknowledges the practical problems an applicant would likely encounter in collecting the input data necessary to identify and perform a risk assessment for critical assets, especially critical payloads. The FAA agrees with Sierra Nevada that it would be better for the U.S. Government to perform all critical asset and critical payload risk assessments necessary to ensure operators comply with the risk criteria in part 450. The FAA therefore removes the requirement for operators to assess the risks to critical assets in preparing a flight hazard analysis, debris analysis, and debris risk analysis. The FAA also removes from § 450.185 (Ground Hazard Analysis) the requirement that the ground hazard analysis ensure that the likelihood of any hazardous condition that may cause damage to critical assets is remote. The FAA notes that the input data and analysis tools necessary to perform a risk assessment for critical assets are often a subset of those the FAA uses to establish the MPL values. The FAA will perform all critical asset and critical payload risk assessments for commercial space transportation operations involving non-Federal sites. Hence, operators should not bear additional cost for the analyses associated with critical assets.

Blue Origin asked how the FAA will address overflight of critical assets. The FAA notes that overflight of a critical asset is possible if the safety criteria set forth in § 450.101 are satisfied. Past experience demonstrates that the critical asset criteria in § 450.101 are satisfied except in occasional cases involving critical assets located within the same launch site. Historically, the risk to critical assets from overflight outside the launch site is negligible.

Virgin Galactic asked how an operator would have input on or dispute the determination of a critical asset. The FAA will discuss with operators any concerns they may have about ensuring protection of critical assets during their licensed activities, but the FAA is not proposing a formal dispute mechanism to adjudicate its determination that an asset is critical or threatened within the risk criterion. Often, it might not be possible to share such information due to national security issues and proprietary interests. The FAA notes, however, that if the FAA denies an application for a license based on its determination that the proposed activity exceeds the risk threshold for critical assets, an applicant may request reconsideration under § 413.21 or a hearing in accordance with part 406 of this chapter.

CSF asked how the FAA will manage proprietary and national security concerns among operators and asset-owners. The FAA does not foresee a need to share proprietary data with non-Federal entities because the Federal Government will conduct the assessment of critical asset risk on behalf of the licensee. Based on discussions with relevant Federal agencies, it is also possible to perform an assessment of critical assets without disclosing the precise location or nature of each asset, thereby eliminating the need to share proprietary and national security information. For example, the USAF 45th Space Wing/Wing Safety identifies what facilities are threatened within the thresholds and shares that information with the appropriate tenants. The tenant can then inform the USAF, or another entity performing the analysis, that an asset is threatened without divulging sensitive information to any entity outside the U.S. Government. The FAA will work with the entities responsible for critical assets to ensure any necessary coordination, taking into account the need to protect proprietary and confidential data.

Several commenters, including CSF, SpaceX, and Virgin Galactic requested clarification as to the meaning of ''loss of functionality'' and how the FAA or other entity would determine what could result in the ''loss of functionality'' of a critical asset. CSF sought clarification on whether infrastructure was ''critical'' if it was needed to support full functionality of a critical asset and on the standard for

determining whether an asset's function had been lost. It inquired whether it would matter if the function could be restored in a timely manner or met with an alternative asset.

CSF and SpaceX also recommended that ''loss of functionality'' be defined in § 401.7 as an asset designated critical by the Secretary of Defense or Administrator of NASA that (a) has been rendered unable to support a specific mission or program deemed critical to the national interest; (b) for which the loss of function will preclude the assurance of a time-critical mission or program unless promptly restored; or (c) for which the asset's function cannot be restored by an accelerated recovery strategy or replaced by an alternate means of mission/program execution. SpaceX and Virgin Galactic requested the FAA include this new definition in an SNPRM, along with a clear rationale for the FAA's proposed requirements for protecting critical assets.

Under the final rule, the party responsible for the critical asset would determine what constitutes loss of functionality. The FAA recognizes that the threshold conditions that cause loss of functionality will be different depending on the type of asset and its robustness. For example, infrastructure is typically more robust than a payload that may be more fragile. For this reason, the FAA does not elect to incorporate a specific standard for what may constitute loss of functionality into the final rule. Likewise, the FAA does not find that it is useful to create a more detailed definition of ''loss of functionality'' but agrees that considerations such as those suggested by CSF and SpaceX (*e.g.,* ability to support missions critical to national interests, or ability to repair or restore function through alternative means in a timely manner) would be relevant and appropriate to determining loss of functionality.

An individual commenter stated that critical asset protection should not compromise protection of the public and neighboring operation personnel. The commenter stated that an operator's required insurance should already cover losses to critical assets.

The FAA notes that the critical asset protection requirements will not compromise the protection of the public or neighboring operation personnel. The FAA retains stringent requirements for protecting the public, including neighboring operations personnel, which are independent of the requirements protecting critical assets. The FAA also disagrees with the commenter that an operator's financial responsibility requirements are adequate to protect critical assets. The FAA is limited by statute to imposing no more than $100 million in financial responsibility to compensate for losses to U.S. Government property. The value of many critical assets easily exceeds that limit, with some critical payloads reportedly costing over a billion dollars. More importantly, financial compensation for a loss may not address the delay before repairs or replacement, during which time national security might be jeopardized or the opportunity to accomplish important national interests missed.

The FAA sought comments on its proposal to require a more stringent criterion for critical assets of utmost importance to the U.S., to be defined as ''critical payloads'' in § 401.7. The FAA proposed to require that the probability of loss of functionality for critical payloads, including essential infrastructure when directly supporting the payload, not exceed 1×10^{-4}. In the past, Federal launch or reentry sites have, on occasion, applied a more stringent requirement, limiting the probability of debris impact caused by launch or reentry hazards to less than or equal to 1×10^{-4} for national security payloads, including essential infrastructure when directly supporting the payload at the launch site. The FAA asked commenters to identify (1) the impacts a 1×10^{-4} risk criterion would have on their operations if applied to critical payloads; (2) whether a more stringent risk criterion should be imposed on any commercial payload; and (3) potential additional costs and benefits associated with applying a 1×10^{-4} risk criterion to critical payloads.

In the final rule, the FAA adopts the risk criterion and definition as discussed in the NPRM preamble, with minor clarifications.

ULA supported the 1×10^{-4} risk criterion for critical payloads, stating that given the time and expense associated with replacing these assets, it was essential they receive the greatest protection possible. It further commented that this risk criterion should also apply to infrastructure and booster hardware in direct support of critical payloads, beginning when booster hardware for that particular critical payload was received and began processing at the launch site. Under ULA's suggestion, at the completion of the launch campaign, the risk criterion should revert to 1×10^{-4}. Virgin Galactic, however, commented that it was not necessary to adopt a heightened risk criteria for critical payloads. It saw no benefit to the discussed 1×10^{-4} requirement over the 1×10^{-4} requirement. It also inquired whether the criterion would apply to payloads on the vehicle of the operator that might be subject to this new risk threshold. If so, Virgin Galactic stated this would constitute managing mission success. Virgin Galactic also inquired whether this risk criterion would apply to payloads at neighboring launch sites. If so, Virgin Galactic believes the FAA must demonstrate need and a nexus to statutorily obligated concerns. It further stated that a more stringent criterion for commercial payloads would place undue burden on operators, potentially requiring additional analyses or redesign. Virgin Galactic noted that it did not intend to carry critical payloads, so impacts to its operations from this requirement would be negligible.

In the final rule, the FAA defines a critical payload as a payload and essential infrastructure directly supporting such a payload that is a critical asset (1) that is so costly or unique that it cannot be readily replaced, or (2) for which the time frame for its replacement would adversely affect the national interests of the United States. As noted in the NPRM, a commercial payload that meets this definition will be treated as a critical payload. The critical payload protection requirement does not apply to payloads on the vehicle of the operator regulated under part 450 but will apply to payloads on neighboring launch sites. The FAA agrees with ULA that the 1×10^{-3} risk criterion should apply to essential infrastructure directly supporting the critical payload, and notes that it will likely apply to booster hardware in direct support of the launch of a critical payload. After a launch of a critical payload, the infrastructure supporting the launch will be critical only if it is essential to the national interests of the United States. The risk criterion determines the protection required for critical assets and payloads. It is not necessary to specify in the regulation that this requirement does not apply during activities that do not exceed the risk threshold.

The FAA disagrees with Virgin Galactic that there is no benefit in applying a 1×10^{-4} risk criterion to critical payloads. As explained in the NPRM, during the interagency review process, DOD requested that the FAA consider specifying a more stringent criterion for certain critical assets of utmost importance. The FAA considers a critical payload a type of critical asset. The FAA finds it necessary to protect payloads such as vital national security payloads and high-priority NASA and NOAA payloads. The NPRM noted that a payload such as NASA's Curiosity rover would likely be afforded this

protection. In the final rule, the FAA adopts this higher protection criterion to safeguard those payloads of utmost importance to the U.S. meriting a greater degree of protection than other critical assets. While the FAA is providing for heightened protection for critical payloads, it expects the protection to have minimal effects on commercial launch and reentry operations. Currently there are few commercial payloads that would rise to the level of being considered critical payloads, although the FAA recognizes that might change in the future, if for instance, DOD were to rely on a commercial service for critical communication support.

Virgin Galactic requested the FAA adopt neither 1×10^{-3} nor a more stringent criterion. It argued the proposed requirement contradicted the requirement in 51 U.S.C. § 50901(a)(7) that the FAA regulate only to the extent necessary. Virgin Galactic stated the FAA did not show why these requirements were necessary, given that Federal launch or reentry sites already protect their own property. Furthermore, Virgin Galactic commented that the FAA would be enforcing a more stringent, but undisclosed criterion and argued the proposed regulation was non-transparent and would deprive the public of the opportunity to comment on this criterion as required by the Administrative Procedure Act. The commenter asserted this undisclosed criterion could prevent operators from planning ahead and would create two standards that might conflict.

As articulated in the NPRM, the FAA finds it necessary to codify current practice at Federal launch or reentry sites to protect critical assets that are of utmost importance to the U.S. and to extend the same protections for launch or reentry activity conducted at non-Federal sites. For launches from Federal sites, this rule does not change current practice; rather it incorporates that practice in a regulation. This regulation consolidates the FAA's requirements for protection of critical assets and critical payloads in all commercial launch or reentry operations, in accordance with the FAA's statutory authority. This rule reduces the need for a Federal or non-Federal site operator to impose critical asset protection requirements on operators as a contractual condition for the use of its facility. The FAA expects that the instances in which a more stringent criterion will be necessary will be rare. Preserving the flexibility to protect particularly vital assets at a more stringent criterion in a license, as proposed in the NPRM, is consistent with current practice at Federal launch and reentry sites and will reduce the need for a Federal or non-Federal launch site operator to impose a more stringent criterion on operators through contract.

CSF and SpaceX commented that the FAA did not assess the cost burden on industry for compliance with the critical asset requirements. Virgin Orbit commented that critical asset calculations would require additional analysis and resources.

In the final rule, the FAA's removal of the requirements for operators to assess impacts to critical assets in flight hazard, ground hazard, debris or debris risk analyses assuages the commenters' concerns for costs associated with performing those analyses. As compared to the proposal, there will be much reduced administrative burden on the operator. The FAA will coordinate as necessary with critical assets owners, and either the FAA or the Federal site operator will provide written confirmation to the operator that the criteria in § 450.101(a)(4) or (b)(4) have been met. If the FAA or Federal site operator determines that the criteria have not been met, either the FAA or Federal site operator will work with the operator to identify any measures that operators may need to undertake in order to protect critical assets to the level required by § 450.101(a)(4) or (b)(4).

An individual commenter stated that the proposed regulation would require companies to perform trade studies to determine if additional controls would be needed to reduce the likelihood of critical asset loss of functionality. The commenter requested the FAA require a cost-benefit analysis to ensure that upfront investment of controls to protect critical assets would be less than the cost of replacing that asset.

When determining whether an asset is a critical asset, the cost of an asset is a factor. However, ultimately an asset is critical if it is essential to the national interests of the United States. If it cannot be replaced in a time frame that satisfies those interests, the cost of the asset is irrelevant. Furthermore, the FAA does not find that most mitigations will impose significant cost.

Virgin Galactic indicated the need for FAA assistance in planning hazard control strategies pursuant to proposed § 450.107(e)(2)(ii) [79] due to the secrecy of some critical assets. If an operator is using physical containment as a hazard control strategy, the FAA or Federal launch or reentry site operator will work with the operator to ensure no critical assets are within the flight hazard area. The most likely mitigation is shifting the launch point or, if the critical asset is mobile, changing in the launch schedule.

Sierra Nevada requested the FAA conduct a publicly-available assessment to determine if the proposed critical asset protection requirements would impact an operator's MPL calculation. CSF requested the FAA engage industry on the topic of critical assets.

The FAA does not find that the protection of critical assets will increase MPL. The designation of an asset as critical is unrelated to financial responsibility. In performing its MPL calculation for U.S. Government property, the FAA ascertains the financial responsibility required so that the likelihood of exceeding losses to government property involved in a licensed activity (taken to mean such property on a Federal launch or reentry site) that are reasonably expected to result from that activity does not exceed 1×10^{-5}; or, in the rarer situation in which a critical asset might not be U.S. Government property on a Federal launch or reentry site, 1×10^{-7}. Critical assets are protected to a less stringent 1×10^{-3}, or in the case of certain critical payloads, 1×10^{-4}, and financial responsibility and protection are not directly related. If anything, the requirement to protect critical assets has the potential to lower MPL for U.S. Government property because the mitigation employed may well remove the possibility that the asset can be damaged even within the more stringent MPL threshold. This would be the case if, to avoid placing the critical asset at risk a launch was rescheduled, its trajectory adjusted, or the critical asset was moved or physically protected. The FAA finds that it is unlikely that a mitigation employed to protect critical assets will change the MPL for third-party liability.

d. Other Safety Criteria (§ 450.101(d), (e), (f), and (g))

The FAA adopts the criteria in § 450.101(d), (e), (f), and (g) with no changes. Section 450.101(d) addresses disposal safety criteria, § 450.101(e) is the requirement for the protection of people and property on orbit, § 450.101(f) requires the notification of planned impacts, and § 450.101(g) addresses the validity of analyses.

The FAA received public comments from Virgin Galactic on the notification of planned impacts. Specifically, Virgin

[79] As proposed, an applicant using physical containment as a hazard control strategy would have been required to describe the methods used to ensure that flight hazard areas are cleared of the public and critical assets. This requirement has been relocated to § 459.110(c)(2) in the final rule.

Galactic advised that a carrier aircraft operating under an airworthiness certificate should be exempt from proposed § 450.101(f). This comment is discussed in further detail in the preamble section on hybrid vehicles. The FAA will not exempt all hybrid vehicle operators from the requirement in § 450.101(f). If an operation has no planned impacts from debris capable of causing a casualty, then no notification will be necessary to comply with § 450.101(f). The regulation is adopted as proposed.

e. System Safety Program (§ 450.103)

In the NPRM, the FAA proposed in § 450.103 that an operator must implement and document a system safety program throughout the operational lifecycle of a launch or reentry system. The system safety program was proposed to include a safety organization (§ 450.103(a)), procedures to evaluate the operational lifecycle of the launch or reentry system (§ 450.103(b)), configuration management and control (§ 450.103(c)), and post-flight data review (§ 450.103(d)).

In the final rule, the FAA adopts proposed § 450.103 with revisions. The FAA replaced the term ''operational lifecycle'' in the introductory paragraph of § 450.103 with simply ''lifecycle'' to clarify that the regulation applies to hazards throughout the lifecycle of a launch or reentry system, not just operational changes to the system. This change is consistent with the statements in the NPRM indicating that, due to the complexity and variety of vehicle concepts and operations, a system safety program would be necessary to ensure that an operator considers and addresses all risks to public safety, which include both design and operational changes to a system.

i. Safety Organization

In the NPRM, the FAA proposed that the system safety program would require an operator to maintain and document a safety organization that has clearly defined lines of communication and approval authority for all public safety decisions, and that includes a mission director and safety official. In the final rule, the FAA adopts the proposed rule with a revision. The FAA removes ''and document'' from the proposed requirement because the first sentence in § 450.103 already requires a system safety program to be documented.

Proposed § 450.103(a)(1) stated that for each launch or reentry, an operator would be required to designate a position responsible for the safe conduct of all licensed activities and authorized to provide final approval to proceed with licensed activities. This position is referred to as the mission director. In the final rule, the FAA adopts § 450.103(a)(1) as proposed. The FAA did not receive comments on this section.

Proposed § 450.103(a)(2) stated that, for each launch or reentry, an operator would be required to designate a position with direct access to the mission director who would be responsible for communicating potential safety and noncompliance issues to the mission director and would be authorized to examine all aspects of the operator's ground and flight safety operations, and to independently monitor compliance with the operator's safety policies, safety procedures, and licensing requirements. This position would be referred to as a safety official. The FAA noted in the NPRM preamble that the absence of a safety official could result in a lack of independent safety oversight and a potential for a breakdown in communications of important safety-related information. The FAA also noted that a safety organization that included a safety official was essential to public safety; however, identifying that individual by name was not necessary. In the final rule, the FAA adopts § 450.103(a)(2) as proposed. Thus, a safety official will need to be in place prior to and throughout any licensed activity.

Rocket Lab supported the proposed safety organization documentation requirements in proposed § 450.103(a), noting the requirements would provide improved flexibility for the industry and support growth in operations, while maintaining clear lines of communication and independence in safety decision making. Virgin Galactic noted that it agreed with the FAA's approach not to require a specific person be listed as the safety official. Microcosm inquired if a specific named safety official would be required for each launch site for operators with licensed activity at multiple sites, and how far in advance that information would need to be provided to the FAA.

The FAA notes that a safety official must be named and in place prior to the initiation of any licensed activity, and an operator may use the same safety official for multiple launch or reentry sites. It may be difficult for a single individual to serve as a safety official for multiple sites if launch or reentry activities were to occur close in time to each other. In those instances, an operator may choose to have multiple safety officials. An operator needs to provide the name of the safety official to the FAA only when requested. The FAA may request the name of the individual who will act as a safety official as part of a compliance monitoring action. As is current practice, the FAA will coordinate in advance with the operator prior to a compliance monitoring action.

ALPA concurred with the requirement for operators to develop a general system safety program. It also recommended that that embedding FAA representatives within commercial space companies would assist the commercial space community in growing robust system safety procedures. The FAA notes that embedding FAA representatives within commercial space companies is outside the scope of this rulemaking.

Proposed § 450.103(a)(3) requires the mission director to ensure that all of the safety official's concerns are addressed. In the final rule, the FAA adopts § 450.103(a)(3) as proposed. The FAA did not receive any comments on this section.

ii. Hazard Management

Proposed § 450.103(b) would have required an operator to establish procedures to evaluate the operational lifecycle of the launch or reentry system, including methods to review and assess the validity of the proposed preliminary safety assessment and any flight hazard analysis throughout the operational lifecycle of the launch or reentry system, methods for updating the preliminary safety assessment and flight hazard analysis, and methods for communicating and implementing the updates throughout the organization. For operators that would need to conduct a flight hazard analysis, the proposed rule would also require an operator's system safety program to include a process for tracking hazards, risks, mitigation and hazard control measures, and verification activities.

In the final rule, the FAA adopts proposed § 450.103(b) with revisions. The FAA renames this section ''Hazard management'' to be more descriptive than the proposed name of ''Procedures.'' The FAA also does not adopt the proposed requirement in § 450.103(b)(1) to conduct a preliminary safety assessment because that requirement has been replaced with the requirement to conduct a hazard control strategy determination in § 450.107(b) in the final rule, as will be discussed later.

As noted, proposed § 450.103(b)(1) would have required the system safety program to include: (i) Methods to review and assess the validity of the preliminary safety assessment throughout the operational lifecycle of

the launch or reentry system; (ii) methods for updating the preliminary safety assessment; and (iii) methods for communicating and implementing the updates throughout the organization. For those operators required to conduct a flight hazard analysis, proposed § 450.103(b)(2) would have required the system safety program to include the same methods for the flight hazard analysis and a process for tracking hazards, risks, mitigation and hazard control measures, and verification activities.

In the final rule, the FAA consolidates the requirements in proposed § 450.103(b)(1) and (b)(2) into § 450.103(b)(1) of the final rule. Section 450.103(b)(1) requires a system safety program to include methods to assess the system to ensure the validity of the hazard control strategy determination and any flight hazard or FSA throughout the lifecycle of the launch or reentry system.[80] The FAA added FSA to this requirement because, as proposed in § 450.101(g) and adopted in the final rule, any analysis used to demonstrate compliance with § 450.101 must use accurate data. This is consistent with the proposal because proposed § 450.103(b)(1)(i) would have required methods to review and assess the validity of the preliminary safety assessment, which would have included components of FSA such as vehicle response modes, public safety hazards associated with vehicle response modes, population exposed to hazards, and CE_C. As previously noted, the final rule in § 450.103(b)(1) uses the term ''lifecycle'' by itself to clarify that the regulation applies to hazards throughout the lifecycle of a launch or reentry system, not just operations hazards.

Proposed § 450.103(b)(1)(iii) and (b)(2)(iii) would have required the system safety program to include methods for communicating and implementing the updates throughout the organization. In the final rule, the FAA consolidates the requirements in proposed § 450.103(b)(1)(iii) and (b)(2)(iii) into § 450.103(b)(2) of the final rule with a revision. The FAA changes the term ''the updates'' to ''any updates'' to clarify the intent for comprehensiveness.

Proposed § 450.103(b)(2)(iv) would have required the system safety program, for operators that must conduct a flight hazard analysis, to include a process for tracking hazards, risks, mitigation and hazard control measures, and verification activities. The FAA adopts the language proposed in § 450.103(b)(2)(iv) of the NPRM in § 450.103(b)(3) of the final rule with a revision. The FAA deletes the terms ''hazard control,'' because it is duplicative with the existing term ''mitigation measures.''

iii. Configuration Management and Control

Proposed § 450.103(c) would have required an operator to (1) employ a process that tracks configurations of all safety-critical systems and documentation related to the operation; (2) ensure the use of correct and appropriate versions of systems and documentation tracked under the subsection; and (3) maintain records of launch or reentry system configurations and document versions used for each licensed activity, as required by the requirement for records in proposed § 450.219.

In the final rule, the FAA adopts § 450.103(c)(1) and (c)(2) as proposed and revises § 450.103(c)(3) as discussed later.

Blue Origin commented that tracking and maintaining records of individual configurations and associated operations documentation for completed operations does not, by itself, enhance public safety. Blue Origin believes that changes should be evaluated for safety impact according to a configuration management plan, which is a deliverable under the current regulations. Blue Origin stated that an approved configuration management plan, coupled with continued accuracy of the application, should suffice without additional requirements for increased documentation and storage of records.

The FAA agrees that tracking and maintaining records for completed operations in isolation does not directly enhance public safety, but tracking and maintaining records for completed operations is an important component of configuration management, which, as a whole, does enhance public safety. The FAA agrees with Blue Origin that an approved configuration management plan coupled with continued accuracy of the application should suffice, but does not agree that current requirements are sufficient. Part 431 does not have any requirements for configuration management, and § 417.111(e) is more general in its requirement to define the launch operator's process for managing and controlling any change to a safety-critical system to ensure its reliability. Section 450.103(c) adds necessary detail.

Blue Origin also stated that proposed § 450.103(c) is repetitive of the recordkeeping requirements in proposed § 450.219, making it unnecessary. Blue Origin added that if the FAA were to maintain the requirement, it should be written in the context of safety-critical systems, which would tie directly to FAA's responsibility to protect public safety.

While the FAA considers § 450.103(c) necessary, proposed § 450.103(c)(3) could be perceived as repetitive. Proposed § 450.103(c)(3) would have required an operator to maintain records of launch or reentry system configurations and document versions used for each licensed activity, as required by § 450.219 (Records). Section 450.219 requires a licensee to maintain for 3 years all records, data, and other material necessary to verify that a launch or reentry is conducted in accordance with representations contained in the licensee's application, the requirements of part 450 subparts C and D, and the terms and conditions contained in the license. The FAA removes the reference to maintaining records in § 450.103(c)(3) and revises the provision to require an operator to document the configurations and versions identified in paragraph (c)(2) for each licensed activity. This is a more focused requirement than § 450.219 and limits the documentation requirement specifically to safety-critical systems, consistent with Blue Origin's recommendation.

iv. Post-Flight Data Review

Proposed § 450.103(d) would have required an operator to employ a process for evaluating post-flight data to (1) ensure consistency between the assumptions used for the preliminary safety assessment, any hazard or flight safety analysis, and associated mitigation and hazard control measures; (2) resolve any identified inconsistencies prior to the next flight of the vehicle; (3) identify any anomaly that may impact any flight hazard analysis, FSA, or safety-critical system, or would otherwise be material to public health and safety and the safety of property; and (4) address any anomaly identified in (3) prior to the next flight, including updates to any flight hazard analysis, FSA, or safety-critical system. The FAA explained in the NPRM that this requirement was consistent with industry practice to review post-flight data to address

[80] Proposed § 450.103(b)(1)(ii) and (b)(2)(ii) would have required the system safety program to include methods for updating the preliminary safety assessment and flight hazard analysis. In the final rule, the FAA simplifies the regulatory text of § 450.103(b) in the final rule, which requires an operator to implement methods to assess the system to ensure the validity of the hazard control strategy determination and any flight hazard or flight safety analysis throughout the lifecycle of the launch or reentry system. Updating the safety analyses is a component of ensuring their validity.

vehicle reliability and mission success and that this requirement imposes no additional burden. The FAA sought comment on whether proposed § 450.103(d) would change an operator's approach to reviewing post-flight data.

In the final rule, the FAA adopts proposed § 450.103(d)(1), (d)(2), and (d)(4) with revisions, and adopts § 450.103(d)(3) as proposed. Section 450.103(d)(1) was modified to replace ''preliminary safety assessment'' with ''hazard control strategy determination'' as discussed earlier. The FAA also added the word ''flight'' in front ''hazard or flight safety analysis'' to make clear that the requirement addresses any flight hazard analysis or FSA.

CSF, Rocket Lab, and Sierra Nevada commented that proposed § 450.103(d) should be deleted because it was overly burdensome and inconsistent with the directive to streamline the regulations. The commenters stated that the requirement would extend the industry practice beyond the typical analysis for reliability and mission success. Sierra Nevada suggested that the section could be re-written to address only post-flight data of safety-critical systems.

As discussed in the NPRM, operator review of post-flight data provides valuable safety information on future operations. The inconsistencies that need to be resolved in this subsection are only those that affect safety analyses and associated mitigation and hazard control measures, such as greater population in the launch area than modeled. The anomalies that need to be addressed are only those that may impact any flight hazard analysis, FSA, or safety-critical system, or are otherwise material to public health and safety and the safety of property, such as the momentary drop-out of an FSS. Therefore, while the FAA revises § 450.103(d)(2) to narrow its applicability, as discussed below, it declines to remove proposed § 450.103(d)(2).

Blue Origin proposed a revision of § 450.103(d)(2) to specify ''public safety.'' Virgin Galactic recommended removing the word ''any'' in front of ''identified inconsistencies,'' and recommended limiting applicable inconsistencies to those that have an effect on the safety criteria of § 450.101.

The FAA agrees that proposed § 450.103(d)(2) could be read to reach more broadly than public safety, so the FAA has revised the section to require that an operator resolve any inconsistencies ''identified in paragraph (d)(1) of this section'' prior to the next flight of the vehicle. This language would explicitly limit the applicability of the provision to the hazard control strategy determination, and any hazard or flight safety analyses and associated mitigation and hazard control measures, as opposed to mission success. The FAA does not agree with Virgin Galactic's suggestion to limit applicable inconsistencies to those that have an effect on the safety criteria of § 450.101. That change would imply that a quantitative analysis is all that is required. As discussed earlier in the hazard management section, the hazard control strategy determination and the hazard and flight safety analyses must be kept up to date throughout the lifecycle of the launch and reentry system, so inconsistencies need to be addressed. The FAA also does not agree with Virgin Galactic to remove the word ''any'' in front of ''inconsistencies'' because it would not change the scope of the requirement, because § 450.103(d)(2) explicitly refers to the analyses in § 450.103(d)(1).

Virgin Galactic recommended that proposed § 450.103(d)(4)—which would have required an operator to address any anomaly identified in paragraph (d)(3) prior to the next flight, including updates to any flight hazard analysis, FSA, or safety-critical system—be revised to state the FAA should review and provide a determination on an operator's post-flight data to approve the operator's ability to launch according to schedule, rather than delaying until all anomalies are resolved.

The FAA notes that proposed § 450.103(d)(4) would not have required FAA approval of the methodology an operator uses to address anomalies in general or a specific anomaly in particular. In order to avoid Virgin Galactic's interpretation that all anomalies must be resolved prior to the next flight, the FAA revised the final rule to require an operator to address any anomaly identified in paragraph (d)(3) prior to the next flight as necessary to ensure public safety. As proposed, this would include updates to any flight hazard analysis, FSA, or safety-critical system. To ensure public safety, the FAA would expect an operator to reassess its safety analyses to determine any potentially new public safety hazards or increased risks to known public safety hazards due to the anomaly and, if necessary, determine the need for any additional mitigation strategies or updates to its safety analyses.

v. Application Requirements

An applicant under proposed § 450.103(e) would have to submit (1) a description of the applicant's safety organization, identifying the applicant's lines of communication and approval authority, both internally and externally, for all public safety decisions and the provision of public safety services; and (2) a summary of the processes and products identified in the system safety program requirements.

In the final rule, the FAA adopts § 450.103(e) as proposed. The FAA did not receive any comments on this section.

f. Hazard Control Strategies (§ 450.107)

In the NPRM, the FAA proposed in § 450.107 that, for each phase of a vehicle's flight, an operator does not need to conduct a flight hazard analysis for that phase of flight if the public safety hazards identified in the preliminary safety assessment (PSA) can be mitigated adequately to meet the requirements of proposed § 450.101 using physical containment, wind weighting, or flight abort, in accordance with § 450.107(b), (c), and (d). If the public safety hazards identified in the PSA could not be adequately mitigated using these methods, an operator would be required to conduct a flight hazard analysis in accordance with proposed § 450.109 to derive hazard controls for that phase of flight.

The FAA has restructured § 450.107 in the final rule to require an operator to use a functional hazard analysis to make a hazard control strategy determination. This requirement is based on the requirements for the PSA that was proposed, but not adopted, in § 450.105. In addition, the FAA has removed from § 450.107 specific details for each hazard control strategy available to operators and instead directs operators to §§ 450.108, 450.109, 450.110, and 450.111, which provide requirements for flight abort,[81] flight hazard analysis, physical containment,[82] and wind weighting, respectively.

Section 450.107 also characterizes flight hazard analysis as a hazard control strategy. Although a flight hazard analysis is different from the other hazard control strategies in that it does not lay out specific hazard controls, it does lay out a process by which hazard controls can be derived. The hazard controls that are derived from the flight hazard analysis, like those defined in the other three hazard

[81] In the NPRM, the requirements for flight abort had been scattered throughout proposed §§ 450.107, 450.123, 450.125, 450.127, 450.129, and 450.165. Section 450.108 is discussed more fully later in the preamble section titled Flight Abort.

[82] The NPRM did not include a separate section for physical containment. In the final rule, as will be discussed later, the requirements from proposed § 450.107(b) are relocated to a new § 450.110 (Physical Containment).

control strategies, are then used as part of the input to the FSA that is used to show compliance with § 450.101(a), (b), and (c). Therefore, because a flight hazard analysis is a means by which an operator derives the appropriate hazard controls, the FAA has characterized it as a hazard control strategy in this final rule. As such, throughout the final rule, a flight hazard analysis is listed with physical containment, wind-weighting, and flight abort as a hazard control strategy.[83] Further, § 450.107(c) retains the proposed requirement that an operator must conduct a flight hazard analysis if the public safety hazards for that phase of flight cannot be mitigated adequately to meet the requirements of § 450.101 through physical containment, wind weighting, or flight abort.[84]

Lastly, the final rule fixes an error in proposed § 450.107, which referenced § 450.101 in its entirety as being relevant to the hazard control strategies, even though certain requirements in § 450.101 regarding the disposal of upper stages, protection of people and property on orbit, and notification of planned impacts, are not relevant to the hazard control strategies defined in § 450.107. Section 450.107 refers instead to § 450.101(a), (b), or (c).

The FAA adds paragraph (b) to § 450.107 to address how an operator determines its hazard control strategy or strategies for any phase of flight during a launch or reentry. This paragraph is based on and replaces a portion of the preliminary safety assessment in proposed § 450.105 of the NPRM. Because an operator determines a hazard control strategy or strategies based on an assessment of potential hazards, the requirements for such an assessment are better suited for this section. The next preamble section discusses the revision to § 450.107(b) more fully.

Proposed § 450.107(e) would have required an applicant in its application to describe its hazard control strategy for each phase of flight. The application requirements in the final rule, in § 450.107(d), similarly require an applicant to provide a description of its hazard control strategy or strategies for each phase of flight. The FAA added the phrase ''or strategies'' to reflect the fact that an operator may use one or more hazard control strategies for any given phase of flight. In addition, because the requirements for physical containment have been relocated to § 450.110, the FAA has likewise relocated the application requirements for physical containment proposed in § 450.107(e) to § 450.110(c).[85] These requirements have been adopted as proposed.

Lastly, § 450.107(d) in the final rule requires an applicant to submit in its application the results of its hazard control strategy determination, including all functional failures identified under § 450.107(b)(1), the identification systems, and a timeline of all safety-critical events. These relate to the hazard control strategy determination, which is discussed in the next section of this preamble.

The FAA received a few comments for proposed § 450.107. One individual commenter supported the additional flexibility inherent in allowing an operator to select its hazard control strategy and noted that this flexibility would help to reduce overall design costs for the private enterprise. Virgin Galactic requested that the FAA define ''traditional hazard controls'' and provide opportunity for public comment through the issuance of an SNPRM. Blue Origin proposed that the FAA amend proposed § 450.107(e)(2)(ii) to require that an applicant describe the methods used to ensure that risk to the public and critical assets in flight hazard areas meet allowable criteria. This latter comment is discussed later in the preamble section titled Physical Containment.

To the extent that Virgin Galactic commented that the term ''traditional hazard controls'' should be defined and comment allowed through publication of an SNPRM, the FAA notes that the NPRM stated that traditional hazard controls included physical containment, wind weighting, and flight abort.[86]

g. Hazard Control Strategy Determination (§ 450.107(b))

In the NPRM, the FAA proposed in § 450.105 to require that every operator conduct and document a PSA for the flight of a launch or reentry vehicle to identify potential public safety impacts early in the design process. The FAA intended the PSA to be a top-level assessment of the potential public safety impacts identifiable early in the design process and broad enough that minor changes in vehicle design or operations would not have a significant impact on, or invalidate the products produced by, the PSA. As proposed, the PSA would have required the operator to identify a number of items, including: A preliminary hazard list that documents all hardware, operational, and design causes of vehicle response modes that, excluding mitigation, have the capability to create a hazard to the public; safety-critical systems; and a timeline of all safety-critical events.[87] An applicant would have been required to submit the PSA result, including the items identified above, in its application for a license.

The final rule removes proposed § 450.105 in its entirety but relocates certain items from the PSA section into § 450.107(b) as part of the hazard control strategy determination. The final rule replaces the requirement for a PSA with a functional hazard analysis and replaces the term ''vehicle response mode'' with ''reasonably foreseeable hazardous events.'' The FAA finds these changes are less prescriptive and burdensome on an operator, while preserving the intended benefits and level of safety of the proposed requirements.

Blue Origin and Microcosm commented that requiring operators to develop a preliminary hazard list that identifies all causes of hazards and vehicle response modes for a PSA, prior to analysis or testing of their vehicle systems, was unreasonable. Blue Origin stated it would be infeasible to document in a preliminary hazard list all hardware, operational, and design causes of vehicle response modes capable of causing a hazard to the public at the preliminary design phase.

[83] The FAA notes that, throughout the preamble, it uses the phrase ''as a hazard control strategy'' to modify physical containment, wind-weighting, flight abort, and flight hazard analysis. For example, in the preamble, the FAA refers to operators who use ''flight abort as a hazard control strategy.'' In such instances, the FAA means that flight abort is being used as a hazard control strategy consistent with the requirements in § 450.108. Likewise, when an operator uses flight hazard analysis as a hazard control strategy, the operator is conducting a flight hazard analysis consistent with the requirements set forth in § 450.109.

[84] Although proposed § 450.107 was written in the negative, stating that an operator was not required to conduct a flight hazard analysis if the public safety hazards identified in the preliminary safety assessment for that phase of flight could be mitigated adequately to meet the requirements of § 450.101 through physical containment, wind weighting, or flight abort, the final rule has revised this language to be more easily understood.

[85] The proposed rule also required an applicant using physical containment as a hazard control strategy to demonstrate that the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area developed in accordance with § 450.133, and to describe the methods used to ensure that flight hazard areas are cleared of the public and critical assets.

[86] *See* 84 FR 15316 (footnote 62).

[87] The operator would also have needed to identify (1) vehicle response modes; (2) public safety hazards associated with vehicle response modes, including impacting inert and explosive debris, toxic release, and far field blast overpressure; (3) geographical areas where vehicle response modes could jeopardize public safety; (4) any population exposed to public safety hazards in or near the identified geographical areas; and (5) the CEC, unless otherwise agreed to by the Administrator based on the demonstrated reliability of the launch or reentry vehicle during any phase of flight.

The commenters noted that operators identify potential hazards, but not all causes of vehicle response modes, prior to the detailed design phase. Blue Origin added that identification of causes was a continuous process that evolves as hardware and operations design matures, and recommended the PSA be limited to analyzing and identifying all functional failures that could have the capability to create a hazard to the public, rather than analyzing the detailed design, which may still be maturing. Blue Origin also noted that early engagement with the FAA through the pre-application process, before a design is mature, was beneficial to both parties.

The FAA concurs that the detailed design may not be mature enough at a preliminary stage such that an operator could define all hardware, operational, and design causes of vehicle response modes with minimal changes downstream in the development process in a preliminary hazard list. Although the preliminary hazard list would not have been provided to the FAA until an applicant submitted an application, the FAA agrees with the commenters that the proposed rule would have required a launch or reentry operator to complete the preliminary hazard list early in the design process, to enable the operator to then carry out its hazard control strategy or strategies. This, as noted by Blue Origin, would not have been practicable as proposed. Accordingly, the FAA does not adopt the proposed requirement for an operator to identify a preliminary hazard list. Instead, the FAA requires an operator, in § 450.107(b), to determine its hazard control strategy or strategies for any phase of flight during a launch or reentry, based on a functional hazard analysis accounting for all functional failures associated with reasonably foreseeable hazardous events, safety-critical systems, and safety-critical events. Even with this change, the FAA also agrees with Blue Origin that this approach will encourage operators to engage early with the FAA, prior to the design becoming mature.

In the final rule, the FAA eliminates proposed § 450.105, but moves, with some revision, the requirements in proposed §§ 450.105(a)(6) through (a)(8) into § 450.107(b). Section 450.107(b), titled ''Hazard Control Strategy Determination,'' requires that for any phase of flight during a launch or reentry, an operator must use a functional hazard analysis to determine a hazard control strategy or strategies accounting for (1) all functional failures associated with reasonably foreseeable hazardous events that, excluding mitigation, have the capability to create a hazard to the public, (2) safety-critical systems, and (3) a timeline of all safety-critical events.

In the NPRM, proposed § 450.105(a)(6) would have required a preliminary hazard list documenting all hardware, operational, and design causes of vehicle response modes that, excluding mitigation, have the capability to create a hazard to the public. The final rule requires an operator to use a functional hazard analysis that accounts for, among other things, all functional failures associated with reasonably foreseeable hazardous events that, excluding mitigation, have the capability to create a hazard to the public. A functional failure is a condition of a system, subsystem, or component function derived by assessing each function against multiple potential failure modes during each phase of the system's mission. This addresses Blue Origin's concerns about the preliminary hazard list because identifying functional failures does not require detailed design information that may not be finalized at the stage of design when a hazard control strategy is being considered.

A functional hazard analysis is a common system safety tool that, as articulated in DOD's MIL–STD–882E, is used to identify and classify the system functions and the safety consequences of functional failure or malfunction.[88] A functional hazard analysis is a foundational tool useful throughout the lifecycle of the launch or reentry system that helps drive the design and development process at a preliminary stage by identifying safety-critical functions of which launch and reentry vehicle developers should be cognizant throughout the process to ensure public safety. The requirement to perform a functional hazard analysis instead of a preliminary hazard list, as proposed in § 450.105, should reduce the burden on operators, for the reasons cited by Blue Origin.

The FAA finds that a functional hazard analysis will preserve the benefits of the preliminary safety assessment proposed in the NPRM, but reduce the burden on applicants by not requiring detailed design information that may not be finalized at the stage of design when a hazard control strategy is being considered. Like the PSA, a functional hazard analysis should help an operator identify specific information relevant to public safety, scope the analyses that must be conducted to ensure that the launch or reentry operation satisfies safety criteria, identify the effect of design and operational decisions on public safety, and provide the operator with an appropriate hazard control strategy for its proposed operation.

Section 450.107(b)(1) in the final rule requires an operator to use a functional hazard analysis to determine a hazard control strategy accounting for all functional failures associated with reasonably foreseeable hazardous events that, excluding mitigation, have the capability to create a hazard to the public. As noted earlier, a functional failure is a condition of a system, subsystem, or component function derived by assessing each function against multiple potential failure modes during each phase of the system's mission. The failure end-effect is the resulting system behavior from each functional failure. Failure end-effects that result in impacts to public safety should in turn identify the safety-critical systems and can be grouped to identify the system hazards to the public. Thus, the inability of a safety-critical system, subsystem, or component to function as designed, or to function erroneously, may potentially result in a hazard to the public. It is important to note that public exposure to a hazard should only be accounted for after determining the potential hazards to the public. That is, limits to public exposure can be a mitigation when considering hazards at the overall system or mission level, and thus not considered when determining what constitutes a hazard to the public (*i.e.,* functional sources of the hazard) for the purposes of § 450.107(b)(1).

The FAA does not retain in § 450.107(b) the items in proposed § 450.105(a)(1) through (a)(5) for an operator to identify (1) vehicle response modes, (2) public safety hazards associated with vehicle response modes, (3) geographical areas where vehicle response modes could jeopardize public safety, (4) any population exposed to public safety hazards in or near the identified geographical areas, and (5) the CE_C. These are addressed in the four hazard control strategies and in FSA.

Finally, the FAA replaces the term ''vehicle response mode'' in the NPRM with ''reasonably foreseeable hazardous events'' in § 450.107(b)(1) in the final rule. As explained in the preamble section discussing § 450.101(c), the NPRM defined ''vehicle response mode'' as a mutually-exclusive scenario that characterizes foreseeable combinations of vehicle trajectory and debris generation. The final rule is less prescriptive by requiring that an operator account for reasonably foreseeable hazardous events, instead of

[88] Department of Defense, Standard Practice for System Safety, MIL–STD–882E, May 11, 2012.

each foreseeable combination of vehicle trajectory and debris generation. Accounting for reasonably foreseeable hazardous events in a functional hazard analysis is consistent with common industry standards. This change also means the FAA does not adopt the proposed definition of ''vehicle response mode'' in § 401.7.

Blue Origin also requested clarification from the FAA on its interpretation of the requirement proposed in § 450.105(a)(8) to provide ''a timeline of all safety-critical events.'' Blue Origin noted that it interprets ''safety'' to mean meeting the collective and individual risk requirements for launch and reentry and, in essence, suggested that the PSA should be limited in scope based on the collective risk criteria resulting from the FSA.

The FAA does not agree with Blue Origin's interpretation nor with its suggestion that this requirement, now in § 450.107(b)(3) in the final rule, be limited by the results of FSA. The FAA will consider any event that occurs during a phase of flight of a launch or reentry vehicle that meets the definition of ''safety critical'' in § 401.7 to be a ''safety-critical event.''

As noted earlier, proposed § 450.105 would have required that every operator conduct and document a PSA for the flight of a launch or reentry vehicle and submit its results. Virgin Galactic inquired as to when the PSA would be due to the FAA, as well as the timeline for the review. The final rule replaces the requirement to conduct a PSA with the requirement to conduct a functional hazard analysis in § 450.107(b). The application requirements for § 450.107(b) are in § 450.107(d) and are due with the application, even though a launch or reentry operator will conduct the functional hazard analysis early in the design phase, well before it applies for a license. This approach is consistent with Blue Origin's recommendation that the analysis be limited to analyzing and identifying all functional failures that could have the capability to create a hazard to the public, rather than analyzing the detailed design, which may still be maturing. As such, in the final rule an applicant is required to provide the results of the functional hazard analysis, including all functional failures, the identification of all safety-critical systems, and a timeline of all safety-critical events.

h. Flight Abort (§ 450.108)

As discussed, if an operator cannot ensure by means other than flight abort [89] that it has sufficiently protected against a high consequence event (as measured by CE_C), the only remaining way to satisfy § 450.101(c) is to use flight abort consistent with the requirements in § 450.108.

In the NPRM, the FAA proposed to address flight abort in several sections. As proposed, to implement flight abort as a hazard control strategy, an operator would have been required to:

(1) Establish flight safety limits and gates in accordance with proposed §§ 450.123 (Flight Safety Limits Analysis) and 450.125 (Gate Analysis);

(2) establish when an operator must abort a flight following the loss of vehicle tracking information with proposed § 450.127 (Data Loss Flight Time and Planned Safe Flight State Analyses);

(3) establish the mean elapsed time between the violation of a flight abort rule and the time when the FSS is capable of aborting flight for use in establishing flight safety limits in accordance with proposed § 450.129 (Time Delay Analysis);

(4) establish flight abort rules in accordance with § 450.165(c) (Flight Abort Rules); and

(5) employ an FSS in accordance with § 450.145 and software in accordance with § 450.111.

Many of these requirements were derived from existing requirements in part 417 and retained a more prescriptive approach to flight abort than the final rule adopts.

Blue Origin, CSF, and SpaceX commented that the FSA requirements in proposed §§ 450.117 through 450.141 were too prescriptive and should be replaced with a performance standard. The commenters cited a lack of flexibility and the use of an approach directed at large orbital launches from Federal launch or reentry sites.

In the final rule, the FAA consolidates the requirements for flight abort in § 450.108 and revises the more prescriptive requirements from the proposal into a single performance-based regulation. As a result of this consolidation, proposed §§ 450.123, 450.125, 450.127, and 450.129 are not included in the final rule. The requirements in these sections have been revised to reflect the performance-based standards in § 450.108(c), which establishes flight safety limits objectives, and § 450.108(d), which establishes flight safety limits constraints. The FAA adds § 450.108(e) in the final rule to relieve the operator from the requirement to use flight abort in certain situations in which high consequence events are possible but would not be effectively mitigated by an FSS. In addition, the flight abort rule requirements proposed in § 450.165(c) have been revised and relocated to § 450.108(f) to reflect the revisions to the flight safety limits requirements. The FAA also moves the reference to FSS reliability from proposed § 450.101(c) to § 450.108(b).

The FAA will provide guidance to illustrate how operators may demonstrate compliance with these requirements. The guidance will encompass many of the traditional means of developing flight safety limits, but operators can develop other means of demonstrating compliance with the performance-based objectives and constraints. As discussed in more detail throughout this section of the preamble, the revisions in the final rule allow for greater flexibility for operators while maintaining the same level of safety as proposed in the NPRM.

i. FSS Thresholds Using CE_C

In the NPRM, an operator required to use flight abort under proposed § 450.101(c) was referred to proposed § 450.145 to determine the required reliability of its FSS based on CE_C. Section 450.145(a)(1) proposed to require an operator to employ an FSS with design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing if the consequence of any vehicle response mode is 1×10^{-2} CE_C or greater. This is the reliability standard for a highly reliable FSS under part 417. Section 450.145(a)(2) proposed to require that, if the consequence of any vehicle response mode is between 1×10^{-2} and 1×10^{-3} CE_C for uncontrolled areas, an operator must employ an FSS with a design reliability of 0.975 at 95 percent confidence and commensurate design, analysis, and testing. The FAA explained that, for operations for which the consequence of a flight failure is less, an FSS—while still being reliable—may not need to be as highly reliable as an FSS for a vehicle operating in an area where the consequence of a flight failure is higher.[90]

In the final rule, the CE_C thresholds for establishing the reliability or other requirements for an FSS proposed in § 450.145(a) have been moved to § 450.108(b). The requirements for a highly reliable FSS proposed in

[89] As discussed, § 450.101(c)(2) and (c)(3) allow an operator to demonstrate it can sufficiently protect against a high consequence event through other means that reduce CE_C below 1×10^{-3} or through demonstrated reliability.

[90] The FAA anticipated that this proposed relaxation of the FSS reliability requirements would be applicable to operations launching or reentering in remote locations or for stages that do not overfly population centers. 84 FR 15328.

§ 450.145(a)(1) remain in § 450.145.[91] However, the requirements for an FSS proposed in § 450.145(a)(2) have been revised and relocated to § 450.143.[92]

Rocket Lab agreed with the concept of quantifying consequence as a key metric in determining the reliability of a flight abort system. Other commenters were critical of the proposed use of CE_C thresholds to set reliability standards for any required FSS, particularly in situations in which a lower reliability FSS may be sufficient to protect the public. For example, SpaceX commented that the requirement in RCC 319 for an FSS with 0.999 at 95 percent confidence reliability was overly prescriptive for low-risk mission profiles. CSF noted that, by ''binning'' the CE_C of a vehicle and then prescribing a fixed reliability requirement for the FSS, risk of an unmitigated (by FSS) CE_C event was not consistent. CSF commented that such an approach requires the same FSS even though the risk varies by an order of magnitude between the extreme values. Several other commenters, including CSF and Sierra Nevada commented that the FAA should not preclude applicants from making a ''safety case'' to justify a certain level of rigor for their FSS.

As noted in the discussion of § 450.101(c), the FAA has retained CE_C as the appropriate regulatory standard for measuring high consequence events. Likewise, for the reasons set forth in that section of the preamble, the FAA has retained the use of CE_C in § 450.108(b) to determine the level of reliability required for an FSS. However, in response to comments, the FAA has added flexibility for FSS that do not need to meet the standard for highly reliable FSS in proposed § 450.145(a)(1) based on the CE_C. The FAA notes that an operator does not need to calculate CE_C for the purposes of determining reliability under § 450.108(b) if it elects to use a highly reliable FSS that meets the requirements of § 450.145.

In the final rule, the FAA removes the prescribed reliability threshold proposed in § 450.145(a)(2) of the NPRM for operations with a maximum CE_C value between 1×10^{-2} and 1×10^{-3}. Accordingly, an operator does not need to employ an FSS with a design reliability of 0.975 at 95 percent confidence and commensurate design, analysis, and testing. Rather, under § 450.108(b)(2), an operator must use an FSS that meets the requirements of § 450.143 if the consequence of any reasonably foreseeable failure mode in any significant period of flight is between 1×10^{-2} and 1×10^{-3} CE_C for uncontrolled areas.

The requirements for the two types of FSS, as well as the removal of the proposed requirements, are discussed in more detail later in this preamble in the discussion of §§ 450.143 and 450.145.

ii. Flight Safety Limits Objectives

Proposed § 450.123(a) stated an FSA must identify the location of uncontrolled areas and establish flight safety limits that define when an operator must initiate flight abort to: (1) Ensure compliance with the safety criteria of § 450.101; and (2) prevent debris capable of causing a casualty from impacting in uncontrolled areas if the vehicle is outside the limits of a useful mission.

The introductory language of § 450.108(c) is a revision of proposed § 450.123(a).[93] In the final rule, § 450.108(c), titled ''Flight Safety Limits Objectives,'' requires an operator to determine and use flight safety limits that define when an operator must initiate flight abort if the conditions enumerated in § 450.108(c)(1) through (c)(5) are met. Alternatively, an operator could meet § 450.108(c)(6) to satisfy the requirements of § 450.108(c)(2) and (c)(4).

The following sections provide additional detail on the performance-based flight safety limits objectives derived from the more prescriptive requirements proposed in the NPRM and respond to public comments on the proposals in the NPRM to the extent they are relevant to compliance with the final rule.

Section 450.108(c)(1)

Section 450.108(c)(1) requires that an operator initiate flight abort to ensure compliance with the safety criteria of § 450.101(a) and (b). The FAA proposed a related requirement in § 450.123(a)(1), which stated that an FSA must identify the location of uncontrolled areas and establish flight safety limits that define when an operator must initiate flight abort to ensure compliance with the safety criteria of § 450.101. In the final rule, § 450.108(c)(1) specifies the relevant subparagraphs in § 450.101 to which this requirement applies. The FAA makes this change in the final rule because the requirement in § 450.101(c)(1) is met through use of flight abort as a hazard control strategy, and § 450.101(d), (e), and (f) are not relevant to flight abort.

Section 450.108(c)(2)

In the NPRM, proposed § 450.123(a)(2) required the operator to prevent debris capable of causing a casualty from impacting in uncontrolled areas if the vehicle is outside the limits of a useful mission. In the final rule, § 450.108(c)(2) requires that an operator initiate flight abort to prevent continued flight from increasing risk in uncontrolled areas if the vehicle is unable to achieve a useful mission.

Although proposed § 450.123(a)(2) focused on debris impacts in uncontrolled areas to define when an operator must initiate flight abort, § 450.108(c)(2), as finalized, acknowledges that debris impact is not the only risk contributor that must be accounted for in determining flight safety limits. For example, a release of toxic propellant following a debris impact may also contribute to risk. Therefore, in § 450.108(c)(2), an operator must determine and use flight safety limits to prevent continued flight from increasing risk once a vehicle can no longer achieve a useful mission. The FAA recognizes that a vehicle may deviate from the limits of a useful mission during a period when hazard containment through flight abort is not possible. In this case, the requirement is not to allow continued flight to increase risk, though some risk from either flight abort or continued flight may be unavoidable.

For example, a vehicle may begin an unplanned turn away from a nominal trajectory while overflying an island. Once the vehicle leaves the limits of a useful mission, the operator should initiate flight abort if continued flight would result in an increase in risk. Pursuant to § 450.108(c)(2), depending on the risk to the public, it may be better to withhold flight abort until the hazards resulting from the abort would not affect the island. However, if the turn is towards a major population center on the island, it may pose less of a risk to the public to abort the flight as soon as it leaves the limits of a useful mission, even if it might result in a hazard posed to less-dense populated areas.

[91] The reliability requirements for a highly reliable FSS will be discussed later in the preamble in the section pertaining to § 450.145.

[92] The reliability requirements for an FSS that is not required to meet the standard for highly reliable FSS will be discussed later in the preamble in the section pertaining to § 450.143.

[93] The FAA has not included in the final rule the language in § 450.123(a) that would have required the operator to identify the location of uncontrolled areas. The FAA finds it is unnecessary to specify this language in the introductory paragraph of § 450.108(c) because an operator must identify the location of uncontrolled areas to meet the objectives of § 450.108(c)(2) through (6).

The concepts of ''useful mission'' and ''limits of a useful mission''[94] are discussed in greater detail in the preamble section on FSA methods (specifically, in § 450.119 (Trajectory Analysis for Malfunction Flight)).

The FAA also notes that the maximum extents of a gate,[95] determined by the limits of a useful mission in proposed § 450.125(c)(2), are addressed by § 450.108(c)(2) in the final rule, which requires flight abort to prevent continued flight from increasing risk in uncontrolled areas if the vehicle is unable to achieve a useful mission. Therefore, trajectories outside the limits of a useful mission that intersect flight safety limits that prevent increased risk in uncontrolled areas must trigger flight abort.

Virgin Galactic recommended that the term ''prevent'' in proposed § 450.123(a)(2) be qualified, as it could be taken to mean many probabilistic values. Although proposed § 450.123(a)(2) has been removed from the final rule, § 450.108(c) uses the term ''prevent'' in five places including § 450.108(c)(2). In § 450.108 (c)(2), (3), (5), and (6), prevention is dependent on the proper functioning of the FSS. There is no expectation that these objectives will be met if the FSS fails to function properly. In § 450.108(c)(4), when the reliability of the FSS is accounted for pursuant to § 450.108(d)(5), prevention is considered to be achieved.

Section 450.108(c)(3)

As noted earlier, the FAA proposed in § 450.125 to establish the requirements for a gate analysis. The FAA explained that the primary purpose of gates is to establish safe locations and conditions to abort the flight prior to the vehicle entering a region or condition where it may endanger populated or other protected areas if flight were to continue. A gate should be placed where a trajectory within the limits of a useful mission intersects a flight safety limit as long as that trajectory meets the risk criteria in § 450.101. In response to comments that the proposed gate analysis requirements created confusion and should be more performance-based, § 450.125 is not included in the final rule.

In the final rule, the concept of gate analysis in proposed § 450.125 is captured in a more performance-based manner in § 450.108(c)(3).[96] Section 450.108(c)(3) requires that an operator initiate flight abort to prevent the vehicle from entering a period of materially increased public exposure in uncontrolled areas, including before orbital insertion, if a critical vehicle parameter is outside its pre-established expected range or indicates an inability to complete flight within the limits of a useful mission. The FAA removes the term ''gate'' in the final rule to allow operators to use another method to comply with the requirements. Furthermore, the term ''gate'' can have different meanings within the industry, which can cause confusion. However, although the term ''gate'' is not used in the final rule, the FAA expects a similar approach to a gate analysis will be used by many operators and by Federal launch or reentry sites. With the removal of explicit gate requirements, the term ''tracking icon'' is no longer required, and the FAA therefore removes the term from the final rule.

The FAA notes that a period of materially increased public exposure would include the beginning of a period when the vehicle will overfly a major landmass prior to orbital insertion (*e.g.,* Europe, Africa, or South America). Overflight of large islands with substantial population may also constitute a period of materially increased public exposure, while overflight of islands with small populations or other areas of sparse population will not constitute a period of materially increased public exposure. Consequence may be used to determine if an exposed area should be considered an area of materially increased public exposure. Orbital insertion also results in a material increase in public exposure due to the possibility of a random reentry from a vehicle that cannot achieve a minimum safe orbit. A vehicle intended for orbit that cannot achieve a minimum safe orbit would require flight abort under § 450.108(c)(3). The FAA will provide guidance on what constitutes materially increased public exposure.[97]

The FAA notes that, for purposes of § 450.108(c)(3), a ''critical vehicle parameter'' is a parameter that demonstrates the vehicle is capable of completing safe flight through the upcoming phase of flight for which population is exposed to hazardous debris effects from reasonably foreseeable failure modes. An example of a critical vehicle parameter outside its pre-established expected range is a tank pressure that is higher than the normal operating range and could lead to a rupture. An example of a critical vehicle parameter that indicates an inability to complete flight within the limits of a useful mission is an acceleration that is too low and would result in a vehicle failing to reach orbit. The operator must select parameters and their acceptable ranges that are appropriate for the vehicle and mission, with consideration of the ability to measure and act on the parameters, and describe in the application the parameters that will be used and how their ranges were determined, pursuant to the application requirement in § 450.108(g)(3).

The intent of the gate analysis in proposed § 450.125 was to prevent unnecessarily exposing the public to hazards from a mission that can no longer be useful. Proposed § 450.125(a) required that an FSA include a gate analysis for an orbital launch or any launch or reentry where one or more trajectories that represent a useful mission intersect a flight safety limit that provides containment of debris capable of causing a casualty. Gate analysis was necessary if a vehicle on a useful mission needed to fly in an area where population could be exposed to hazards in the event of a vehicle failure. As long as a trajectory met the individual and collective risk criteria of § 450.101(a)(1) and (a)(2) for a launch, or (b)(1) and (b)(2) for a reentry, when treated like a nominal trajectory with normal trajectory dispersions, the flight safety limit with which it intersected would be removed (or ''relaxed,'' as described in the NPRM),[98] so flight of the vehicle would not be aborted. Alternatively, under proposed § 450.125(b)(1), the flight safety limit could be replaced with a gate that allowed continued flight as long as a real-time measure of performance indicated that the vehicle was able to complete a useful mission.

Section 450.108(c)(3) achieves the intent in proposed § 450.125(a) because it codifies the goals achieved by gate analysis but allows for alternative approaches to achieve the same objective. Similar to the gate analysis in proposed § 450.125(a), the analysis in § 450.108(c)(3) is required when a trajectory that represents a useful

[94] A useful mission means a mission that can attain one or more objectives. Limits of a useful mission means the trajectory data or other parameters that bound the performance of a useful mission, including flight azimuth limits.

[95] A gate is an opening in a flight safety limit through which a vehicle may fly, provided the vehicle meets certain pre-defined conditions such that the vehicle performance indicates an ability to continue safe flight. Gate analysis has been removed from the final rule.

[96] The performance-based requirement in § 450.108(c)(3) incorporates elements of proposed § 450.125(a), (b)(1), (b)(2), and (b)(4).

[97] For example, a period of materially increased public exposure would include any area where the CE_C from any on-trajectory failure mode is greater than 1×10^{-2}.

[98] *See* 84 FR 15386.

mission approaches an uncontrolled area.

Proposed § 450.125(b)(1) required that a gate analysis establish a relaxation of the flight safety limits that allows continued flight or a gate where a decision will be made to abort the launch or reentry or allow continued flight. This proposed requirement is addressed in § 450.108(c)(3) because it also either allows continued flight without a check of critical vehicle parameters if the upcoming population exposure is not materially increased, or requires a check of critical vehicle parameters before continued flight if the upcoming population exposure is materially increased. In this respect, the final rule provides clarity on the point at which the check of critical vehicle parameters is required, whereas the proposal was ambiguous on when a gate would be required.

Proposed § 450.125(b)(2) stated that, if a gate is established, a gate analysis must include a measure of performance at the gate that enables the flight abort crew or autonomous FSS to determine whether the vehicle is able to complete a useful mission or abort the flight if it is not. In the final rule, this requirement is addressed in § 450.108(c)(3), which states, ''if a critical vehicle parameter is outside its pre-established expected range or indicates an inability to complete flight within the limits of a useful mission.'' The pre-established expected range of the critical vehicle parameters are those values that do not predict the vehicle will fail or exit the limits of a useful mission, or simply those that indicate the vehicle is performing as intended. Accordingly, as with gate analysis under the proposal, the operator will establish the measure of performance—referred to as the critical vehicle parameter(s) and pre-established expected range(s) in the final rule—that will determine whether flight abort must be initiated.

Proposed § 450.125(b)(4) stated that a gate analysis must establish, for an orbital launch, a gate at the last opportunity to determine whether the vehicle's flight is in compliance with the flight abort rules and can make a useful mission, and to abort the flight if it is not. This requirement is addressed by the § 450.108(c)(3) requirement that critical vehicle parameters must be checked before orbital insertion. Therefore, § 450.108(c)(3) is a more performance-based requirement that is consistent with the proposed § 450.125(b)(4).

The FAA notes that certain concepts in proposed § 450.125 are also captured in § 450.108(c)(2), (c)(4), and (d)(7), as discussed in the preamble associated with those sections. The FAA finds that the intent of the proposed gate analysis requirements would be clearer if these requirements are included as separate flight safety limits objectives and constraints because they can also be applied outside of a traditional gate analysis.

The FAA received several comments on proposed § 450.125 focused on the proposed definition of the term ''gate,'' the prescriptive nature of the requirements for a gate analysis, and the manner in which gates would be applied. Boeing, Lockheed Martin, Northrop Grumman, and ULA commented that the gate analysis must establish a relaxation of the flight safety limits that allows continued flight or a gate where a decision will be made to abort the launch or reentry or allow continued flight. The commenters asserted that flight rules and placards can constrain allowable trajectories, and that it is appropriate to disapprove a trajectory if the nominal trajectory is beyond the flight safety limits. The FAA declined to make the recommended change because § 450.108(c)(3) allows a nominal vehicle to overfly a populated area, which is current practice. A flight safety limit that intersects the nominal trajectory trace can only be enforced if the vehicle has experienced a malfunction before reaching the limit. These limits are common, such as gates protecting downrange landmasses before overflight.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended replacing ''flight abort'' with ''flight termination'' to distinguish between a flight abort for a reason unrelated to public safety. The FAA did not adopt this change because the term ''flight abort'' is meant to encompass hazard control strategies that may not include destruction of a vehicle or termination of thrust. For example, flight abort for a captive carry mission may entail aborting the mission and returning to base or landing at a contingency site. The FAA finds that the term ''flight termination'' has connotations that are inconsistent with the FAA's intent.

Boeing, Lockheed Martin, Northrop Grumman, and ULA requested clarification on the term ''relaxation of a flight safety limit'' in the NPRM and questioned whether it is appropriate for an operator to relax a flight safety limit.

The FAA agrees that the proposed language ''relaxation of a flight safety limit'' lacked clarity and that the regulation should be clear about when a vehicle may overfly population without a performance check. The final rule removes terms related to relaxed flight safety limits and states in § 450.108(c)(3) that the critical vehicle parameter check is required prior to entering a period of materially increased public exposure in uncontrolled areas, including before orbital insertion. The meaning of ''materially increased public exposure'' is discussed earlier in this section.

Rocket Lab inquired whether a gate analysis is required for when a trajectory intersects a flight safety limit, if an operator was using flight abort only as a hazard control strategy.

In the final rule, pursuant to § 450.108(c)(3), this performance check is not necessary if the vehicle is not approaching an area of materially increased public exposure regardless of how the operator develops flight safety limits, as long as it meets requirements in § 450.108(c) and (d). The FAA also notes that if flight abort is not required as a hazard control strategy to meet the safety criteria of § 450.101, an operator may still choose to use flight abort at its discretion. Compliance with § 450.108(c)(3) is only required for an operator required to use flight abort as a hazard control strategy to meet the safety criteria of § 450.101.

Section 450.108(c)(4)

As noted earlier, proposed § 450.125(c) would have required the extent of any gate or relaxation of the flight safety limits to be based on normal trajectories, trajectories that may achieve a useful mission, collective risk, and consequence criteria. Section 450.108(c)(4) in the final rule is related to proposed § 450.125(c)(1) and (c)(2) in that it describes the consequence requirements for flight safety limits; however, it contains differences as explained in this section of the preamble.

In the final rule, § 450.108(c)(4) requires that an operator initiate flight abort to prevent conditional expected casualties greater than 1×10^{-2} in uncontrolled areas due to flight abort or due to flight outside the limits of a useful mission from any reasonably foreseeable off-trajectory failure mode initiating in any significant period of flight. The purpose of § 450.108(c)(4) is to ensure that, when an operator cannot develop flight safety limits that prevent hazards from affecting uncontrolled areas, the failure modes that result in deviations from the planned trajectory will not result in a high consequence event if the vehicle is unable to achieve a useful mission. This scenario can arise when some public exposure must be accepted to allow useful vehicles to continue during a phase of flight when flight abort is still used as a hazard control strategy.

This situation frequently occurs, for example, on northeasterly missions launched from the Eastern Range that are permitted to overfly some portions of Nova Scotia and Newfoundland on trajectories within the limits of a useful mission. If the vehicle fails after the overflight has begun and reaches flight safety limits protecting more westerly portions of the uncontrolled areas from flight outside the limits of a useful mission, the consequence from flight abort must meet the criteria in § 450.108(c)(4).

Proposed § 450.125(c)(1) and (c)(2) included the consequence requirements as a part of gate analysis. In the final rule, the consequence requirements are a standalone flight safety limits objective in § 450.108(c)(4). The final rule also makes several revisions. First, the final rule expressly states flight safety limits are required only to prevent high consequence events in uncontrolled areas. This concept was implied in the NPRM because, per proposed § 450.123(a)(2), flight safety limits must prevent debris capable of causing a casualty from impacting in uncontrolled areas if the vehicle is outside the limits of a useful mission. The consequence criteria in proposed § 450.125(c)(1) and (c)(2) were applicable to flight safety limits that did not prevent debris from impacting in uncontrolled areas following a gate or relaxation in a flight safety limit developed per § 450.123(a)(2). Therefore, the proposed consequence criteria only applied to uncontrolled areas.

Second, the requirement in the final rule applies in cases of flight abort and in cases where the vehicle is outside the limits of a useful mission. The consequence criteria in proposed § 450.125(c)(1) and (c)(2) were only applicable in cases of flight abort. If only flight abort action were considered, a high consequence event resulting from other outcomes (intact impacts, structural breakup, etc.) outside the limits of a useful mission might not be identified.

Vehicle failures within the limits of a useful mission are excluded from the consequence criteria in § 450.108(c)(4) in the final rule because flight abort cannot prevent a failure from affecting uncontrolled areas that must be exposed to allow a vehicle on a useful mission to continue flight. For example, if a vehicle begins an unplanned turn from the nominal trajectory while overflying uncontrolled areas and breaks up aerodynamically before exiting the limits of a useful mission, this failure would not count against the consequence criteria because the vehicle was within the limits of a useful mission when the outcome of the failure occurred. Collective risk requirements still apply in these scenarios and ensure that the risk is met for any trajectory that the operator declares as representing a useful mission, pursuant to § 450.108(d)(7).

Third, whereas proposed § 450.125(c)(1) and (c)(2) concerned the consequence from flight abort ''resulting from any reasonable vehicle response mode,'' § 450.108(c)(4) concerns the consequence from any ''reasonably foreseeable off-trajectory failure mode.'' The replacement of ''vehicle response mode'' with ''failure mode'' is discussed in the preamble section on § 450.101(c)(2).[99] The term ''off-trajectory'' was added to explain further which types of failures must result in the consequence criteria being met. Off-trajectory failures are those for which the vehicle deviates from its intended flight path—for example due to failures of the guidance, navigation, or control systems. Outcomes from on-trajectory failures, such as an explosion or loss of thrust along the intended flight path, are not able to be fully mitigated by an FSS because once the failure occurs the hazard cannot be prevented from affecting uncontrolled areas if the failure occurred during a period in which the uncontrolled areas were exposed. At best, the hazard can be reduced for some failure modes such as a loss of thrust that may result in an intact impact unless a destructive abort that disperses propellants is implemented. In this case, flight abort may still be required to reduce risk per § 450.108(c)(2) since the vehicle is unable to achieve a useful mission, but the consequence criteria would not apply.

Boeing, Lockheed Martin, Northrop Grumman, and ULA requested clarification on the intent of the CE_C limits in proposed § 450.125(c)(1) and (c)(2). In the final rule, the FAA retained the CE_C limits related to flight abort. The intent of these limits is to ensure that, when flight abort or a flight outside the limits of a useful mission resulting from an off-trajectory failure mode produces debris capable of causing a casualty, it nonetheless protects against a high consequence event. In other words, flight abort provides sufficient protection against a high consequence event when flight abort is implemented to prevent the CE_C from any reasonably foreseeable off-trajectory failure mode initiating in any significant period of flight from exceeding 1×10^{-2} casualties, even though the public in uncontrolled areas might be exposed to debris from a flight abort.

SpaceX asked if there were restrictions to using flight safety limits that met the risk requirements of proposed § 450.101 but did not meet the 1×10^{-2} CE_C requirement.

Under § 450.108(c)(4), flight safety limits must not allow CE_C greater than 1×10^{-2} unless the consequence resulted from a vehicle within the limits of a useful mission and therefore could not be mitigated by flight abort without aborting a vehicle on a useful mission, or the consequence resulted from an on-trajectory failure mode.

An example of when the consequence requirement would not apply is when a vehicle on a normal trajectory suffers a spontaneous breakup. This on-trajectory event cannot be mitigated by flight abort without terminating a useful vehicle before it overflies uncontrolled areas. An operator would not be required to initiate flight abort under the final rule for this scenario. An example of when the consequence requirement would apply is if a malfunction causes the vehicle to depart from the limits of a useful mission. If CE_C is used to measure high consequence events, the flight safety limits must prevent the consequence from such a failure mode (*i.e.,* a malfunction that causes the vehicle to depart from the limits of a useful mission) from exceeding 1×10^{-2} CE_C, whether produced by flight abort or other reasonably foreseeable outcomes (such as aerodynamic/structural breakup, intact impact, etc.).

SpaceX requested guidance on how an operator should balance E_C and CE_C when designing flight safety limits and expressed concern that E_C may increase as an operator attempts to reduce CE_C. SpaceX also recommended removing all numerical values associated with CE_C and requiring the consequence of flight abort at the flight safety limits to be minimized.

Regarding the balance of E_C and CE_C, the FAA notes that flight safety limits must be designed to meet the E_C and CE_C requirements as described in § 450.108(c)(1) and (c)(4), respectively. If the flight safety limits must be modified to reduce the CE_C to acceptable levels, E_C must still be kept within acceptable levels. The FAA does not agree with the recommendation to remove the numerical value associated with the CE_C requirement because this could allow flight safety limits that result in a high consequence through flight abort or through flight abort inaction. However, the final rule does

[99] The FAA also notes that the term ''in any one-second period of flight'' has been changed throughout the final rule to the term ''in any significant period of flight,'' as described in the preamble section discussing § 450.101(c).

allow for methods of measuring consequence other than CE_C that provide an equivalent level of safety under § 450.37.

Section 450.108(c)(5)

Section 450.108(c)(5) requires that an operator initiate flight abort to prevent the vehicle state from reaching identified conditions that are anticipated to compromise the capability of the FSS if further flight has the potential to violate a flight safety limit. For example, if a roll rate of a particular magnitude would preclude ground-based flight abort commands from being received by the vehicle, a flight safety limit should be developed that triggers flight abort before the roll rate reaches this value.

Section 450.108(c)(5) is related to the flight abort rule in proposed § 450.165(c)(3)(ii), which required that flight abort rules include that the FSS must abort flight when the vehicle state approaches conditions that are anticipated to compromise the capability of the FSS and further flight has the potential to violate the FSS. In the NPRM, the FAA did not include a flight safety limit objective that corresponded with the flight abort rule in proposed § 450.165(c)(3)(ii). The FAA adds this flight safety limit objective in § 450.108(c)(5). The flight abort rule in proposed § 450.165(c)(3)(ii) is in § 450.108(f)(2)(ii) and is discussed further under Flight Abort Rules in the following paragraphs.

Section 450.108(c)(6)

Section § 450.108(c)(6) states that, in lieu of meeting § 450.108(c)(2) and § 450.108(c)(4), an operator may initiate flight abort to prevent debris capable of causing a casualty due to any hazard from affecting uncontrolled areas using an FSS that complies with § 450.145. The FAA adds this regulation to clarify that a CE_C analysis is not required if an FSS that complies with § 450.145 provides hazard containment. Hazard containment is a means of achieving the goals of § 450.108(c)(2) and (c)(4) because, if an operator provides for hazard containment, continued flight will not increase risk in uncontrolled areas and hazard containment would prevent conditional expected casualties greater than 1×10^{-2} in uncontrolled areas. This requirement is consistent with the NPRM because if an operator is able to contain hazards throughout the period when flight abort is used, the proposed consequence requirements in § 450.125(c)(1) and (c)(2) would not apply since a gate analysis would not be necessary.

In developing the NPRM, the FAA considered alternatives to a conditional risk limit, including the current approach employed in § 417.213.[100] The FAA rejected using the approach in § 417.213 as a requirement in part 450 because it is unnecessarily restrictive to require designated impact limit lines to bound the area where debris with a ballistic coefficient of three pounds per square foot or more is allowed to impact if the FSS functions properly, as evidenced by the need for the FAA to grant waivers to allow innovative missions to proceed safely, such as return of boosters to the launch site.[101] However, if an operator satisfies the current requirements in § 417.213, it would meet the requirement in § 450.108(c)(6). This strategy is not an option when hazard containment is not possible during a phase of flight when flight abort must be used as a hazard control strategy. For example, if an area of overflight occurs on the nominal trajectory during a phase of flight when flight abort is still used as a hazard control strategy, an operator cannot claim containment during this phase and must meet § 450.108(c)(2) and (c)(4). The FAA notes that its approach in § 450.108(c) to employing conditional risk limits is consistent with a recommendation made by the National Academy of Sciences.[102]

Virgin Galactic recommended adding an exclusion to the requirement for flight safety limits in proposed § 450.123 for vehicles that already meet the public risk criteria, as flight safety limits analysis amounts to an additional layer of regulation that Virgin Galactic believed was redundant and unneeded.

The FAA determined that a clarification is required in response to this recommendation. Pursuant to § 450.108(a), flight safety limits are only required in phases of flight in which flight abort is used as a hazard control strategy to meet the safety criteria of § 450.101. The FAA does not agree that meeting public risk criteria, or just collective and individual risk, are the only objectives of flight abort, as explained in the preamble section on CE_C. The FAA finds it necessary to include additional objectives for flight abort in § 450.108(c) to protect public safety adequately. Lastly, the preamble section on CE_C describes why a conditional risk assessment is appropriate to provide the public protection from unlikely but catastrophic events in the context of launch and reentry operations.

iii. Flight Safety Limits Constraints

Section 450.108(d) in the final rule describes flight safety limits constraints. This subsection consolidates the flight safety limits constraints in proposed §§ 450.123 through 450.129.

Section 450.108(d)(1)

Proposed § 450.123(b)(1) required flight safety limits to account for temporal and geometric extents on the Earth's surface of any vehicle hazards resulting from any planned or unplanned event for all times during flight.

In the final rule, § 450.108(d)(1) requires that flight safety limits account for temporal and geometric extents on the Earth's surface of any reasonably foreseeable vehicle hazards under all reasonably foreseeable conditions during normal and malfunctioning flight. The FAA adds ''reasonably foreseeable'' before ''vehicle hazards'' to be consistent with language elsewhere in the regulation. As noted earlier, ''reasonably foreseeable'' is a term commonly used in system safety. The FAA also replaces ''from any planned or unplanned event for all times during flight'' in proposed § 450.123(b)(1) with ''under all reasonably foreseeable conditions during normal and malfunctioning flight'' in § 450.108(d)(1). This revision does not result in a substantive change from the proposal, but the FAA finds the revised language to be clearer and consistent with language elsewhere in the regulation through use of the term ''reasonably foreseeable conditions'' in place of the proposed ''planned or

[100] The FAA currently requires in § 417.213 that ''a flight safety analysis must identify the location of populated or other protected areas, and establish flight safety limits that define when an FSS must terminate a launch vehicle's flight to prevent the hazardous effects of the resulting debris impacts from reaching any populated or other protected area and ensure that the launch satisfies the public risk criteria.''

[101] See *Waiver of Debris Containment Requirements for Launch.* 81 FR 1470, 1470–1472 (January 12, 2016).

[102] In 2001, the National Research Council published a report on ''Streamlining Space Launch Range Safety,'' which included a recommendation that ''destruct lines and flight termination system requirements should be defined and implemented in a way that is directly traceable to accepted risk standards.'' See p. 44 of IBSN 0–309–51648–X available at *http://www.nap.edu/catalog/9790.html.* The flight safety limit requirements currently in § 417.213(d) are not directly traceable to accepted risk standards in that they require the analysis to ''establish designated impact limit lines to bound the area where debris with a ballistic coefficient of three or more is allowed to impact if the flight safety system functions properly.'' As noted earlier, the approach in § 417.213 has been rejected because it is unnecessarily restrictive, as evidenced by the need for the FAA to grant waivers to allow innovative missions to proceed safely, such as return of boosters to the launch site. The FAA found that those waivers did not jeopardize public safety based on conditional risk analyses that are inherent in methods the NAS referred to as accepted risk standards.

unplanned event.'' This standard does not hold the operator responsible for unforeseeable events.

Section 450.108(d)(2)

Section 450.108(d)(2) requires that flight safety limits account for the physics of hazard generation and transport including uncertainty. This articulation represents a revision of proposed § 450.123(b)(2), which stated flight safety limits must account for potential contributions to debris impact dispersions. The FAA finds the NPRM language was unclear as to the scope of the requirement. The NPRM would have required an operator to consider how factors like winds, imparted velocities, and uncertainty in mass properties affect where debris from a failed vehicle may impact. However, direct debris impacts are not the only hazards posed by vehicle failures. For example, an intact impact of a vehicle may lead to a blast wave or release of toxic propellant, both of which must be considered when developing flight safety limits. Hazard generation and transport are factors that apply to all hazards, unlike factors that only apply to determining debris impact dispersions. Hazard generation refers to the process by which a vehicle becomes a hazard, and transport is how the hazard moves from the source to an exposed person or asset. Simply accounting for potential contributions to debris impact dispersions would not encompass all hazards, though debris impact dispersions also need to be accounted for under § 450.108(d)(2).

Blue Origin requested clarification of the term ''potential contributions'' in proposed § 450.123(b)(2). The FAA notes the term ''potential contributions'' to debris impact dispersions are those that influence the propagation of debris following a vehicle breakup, such as explosion-induced velocities, winds, uncertainty in aerodynamic properties, etc. The FAA further notes the term ''potential contributions'' does not appear in the final rule. The FAA will address development of debris impact dispersions in guidance, similar to the existing Flight Safety Analysis Handbook.

Section 450.108(d)(3)

In the NPRM, the FAA proposed to consolidate and update data loss flight times and planned safe flight states requirements in proposed § 450.127 (Data Loss Flight Time and Planned Safe Flight State Analyses). As explained in the proposal, data loss flight time analysis is necessary to establish when an operator must abort a flight following the loss of vehicle tracking information. In the NPRM, the FAA explained that data loss flight time would be the shortest elapsed thrusting or gliding time during which a vehicle flown with an FSS can move from its trajectory to a condition in which it is possible for the vehicle to violate a flight safety limit. Data loss flight times would have been required from the initiation of flight until the minimum elapsed thrusting or gliding time was no greater than the time it would take for a normal vehicle to reach the final gate crossing or the planned safe flight state.

Section 450.108(d)(3) revises the prescriptive requirements in § 450.127 to require that flight safety limits account for the potential to lose valid data necessary to evaluate the flight abort rules. Data is valid when it is of sufficient quality to be used to make flight abort decisions. Data used to make flight abort decisions can be missing or invalid for a number of reasons, but resulting from an unplanned event, such as disruption or loss of communication pathways with ground-based or onboard tracking sensors. Despite an operator's or launch site's best efforts, the potential to lose track data is a contingency for which operators must plan.

Section 450.108(d)(3) requires an operator to account for the potential to lose valid data necessary to evaluate the flight abort rules because the loss of valid data does not absolve the operator from attempting to meet the flight safety limits requirements in § 450.108(c) and (d). Section 450.108(d)(3) captures the performance-based intent of proposed § 450.127 (Data Loss Flight Time and Planned Safe Flight State Analyses). The FAA finds that this revision allows for the use of data loss flight times as a means of satisfying § 450.108(d)(3), but also allows operators to propose other methods of meeting the requirement.

Microcosm and SpaceX requested clarification of the intent for proposed § 450.127. The FAA notes that the purpose of proposed § 450.127 was to determine when flight abort is required if track data used to evaluate the flight abort rules is lost. If a vehicle is able to reach a flight safety limit when track data is lost, then a countdown begins that would indicate, upon reaching zero, that a flight safety limit may have been reached. Under proposed § 450.165(c)(3)(iii), flight abort would have to occur no later than when the countdown reaches zero. Throughout flight, the time for the countdown to reach zero is the data loss flight time. If reliable tracking sources are regained before the countdown reaches zero, then flight abort rule evaluation resumes and the countdown resets. In Federal launch site parlance, data loss flight times are known as ''green numbers.''

In the NPRM, data loss flight times would not be used if a vehicle's tracking icon has potentially passed a final gate when the countdown reaches zero because this could result in introducing hazards in uncontrolled areas that the gate protects. As described in proposed § 450.127(b)(1), there are no data loss flight times when the minimum elapsed thrusting or gliding time is greater than the time it would take for a normal vehicle to reach the final gate crossing, to preclude abort from occurring after a gate crossing.

Proposed § 450.127(c)(1) through (c)(3) described other phases of flight when data loss flight times would be unnecessary. If a vehicle cannot reach a flight safety limit, then a data loss flight time cannot be computed and would be unnecessary. It may seem futile to have a flight safety limit that cannot be reached, but for purposes of data loss flight times a flight safety limit is considered unreachable if the vehicle cannot reach it starting from within normal trajectory limits when track data is lost. The flight safety limit may still be reachable if the vehicle was outside of normal trajectory limits at the time data was lost. Therefore, these flight safety limits may still have value.

Finally, in the NPRM, data loss flight times would not be necessary in phases of flight when an FSS is not required. There may still be flight safety limits during such phases if an operator retains an FSS and active flight abort rules even though they are not required. Loss of track data would not require flight abort since the flight safety limits themselves are unnecessary. This approach would allow operators to be conservative in the use of flight safety limits in phases of flight when they are unnecessary, with no threat of flight abort from loss of track data.

Proposed § 450.127(b)(3) would have permitted the real-time computation and application of data loss flight times during vehicle flight, in which case the state vector just prior to loss of data should be used as the nominal state vector. The FAA finds that § 450.108(d)(3) provides the same level of safety as the proposed requirement in § 450.127 and provides additional flexibility. The FAA will provide guidance on compliance with § 450.108(d)(3). The proposed requirement in § 450.127 can be part of a viable means of compliance with § 450.108(d)(3). An operator may propose other means of compliance with § 450.108(d)(3). Microcosm and SpaceX requested clarification of the intent for proposed § 450.127. The FAA

notes that the purpose of proposed § 450.127 was to determine when flight abort is required if track data used to evaluate the flight abort rules is lost.

Section 450.108(d)(4)

Proposed § 450.129 (Time Delay Analysis) would have required an operator to perform a time delay analysis to establish the mean elapsed time between the violation of a flight abort rule and the time when the FSS is capable of aborting flight for the purpose of establishing flight safety limits. The time delay analysis would have been required to determine a time delay distribution that accounts for all foreseeable sources of delay.

While proposed § 450.129 does not appear in the final rule, the objective of proposed § 450.129 is captured by § 450.108(d)(4). Section 450.108(d)(4) requires that flight safety limits account for the time delay, including uncertainties, between the violation of a flight abort rule and the time when the FSS is expected to activate. The term in the final rule ''time delay including uncertainties'' is consistent in intent with the NPRM language ''mean elapsed time'' and ''determine a time delay distribution.''

The time delay distribution in proposed § 450.129 is distribution in a statistical sense. The uncertainties referred to in § 450.108(d)(4) are the same as the time delay distribution referred to in proposed § 450.129. To meet § 450.108(d)(4), the operator must consider the range of values that the actual time delay could fall between. While proposed § 450.129 stated that the time delay analysis would be used in establishing flight safety limits, the final rule specifies that the time delay is a constraint in developing flight safety limits. Time delays are important in a flight safety limits analysis because the decision to abort flight must be made in time to achieve the flight safety limits objectives. This is not possible unless the time delay between the violation of a flight abort rule and the time when the FSS is expected to activate is known. The FAA finds that including this requirement in the flight safety limits constraints provides more clarity regarding the relation between this requirement and the flight safety limits.

Section 450.108(d)(5)

Section 450.108(d)(5) requires an operator to determine flight safety limits that account for individual, collective, and conditional risk evaluations both for proper functioning of the FSS and failure of the FSS. To satisfy this requirement, an operator must account for the reliability of the FSS under two scenarios when determining whether individual, collective, or conditional risk requirements are met with the flight safety limits objectives. The applicable flight safety limits objectives are located in § 450.108(c)(1), which addresses individual and collective risk, and § 450.108(c)(4), which addresses conditional risk. Although § 450.108(c)(2) is also associated with risk, it is independent of the FSS reliability because it is a comparison between the risk if the FSS is activated and the risk if it is not activated.

To comply with § 450.108(d)(5), first, the FSS must be assumed to have a reliability of one, meaning it is presumed to function without error. The risk evaluations using an FSS reliability of one ensure that the criteria are met if the FSS functions as intended. This requirement is important because an FSS failure should not be relied upon to make flight safety limits compliant with risk requirements. The decision to implement a flight abort is a deliberate safety intervention. The FAA wants to be sure that the public is safe given any deliberate safety intervention. This objective is consistent with proposed § 450.125(c)(1) and (c)(2), which contain requirements for consequence from flight abort, implying that the flight abort action occurs, and is also consistent with current practice for all risk evaluations.

Second, the risk evaluations must consider the predicted reliability of the FSS. Predicted reliability of the FSS is important because even low probabilities of FSS failures can have significant impacts on risk. This consideration is consistent with the NPRM because FSS reliabilities are a fundamental component of the viability of flight abort as a hazard control strategy, and it is expressly stated in the final rule for clarity. Consideration of the FSS reliability in risk evaluations is also consistent with current practice.

The final rule allows an operator flexibility to establish the design, analysis, and testing of its FSS and the conditions that require initiation of flight abort as long as the CE_C is no greater than 1×10^{-2} for any reasonably foreseeable failure mode in any significant period of flight that could require the operator to initiate flight abort, accounting for the reliability of the FSS pursuant to § 450.108(d)(5).

Section 450.108(d)(6)

Proposed § 450.123(b)(3) would have added a requirement to design flight safety limits to avoid flight abort under conditions that result in increased collective risk to people in uncontrolled areas, compared to continued flight. In the NPRM, the FAA explained that the proposed requirement is equivalent to the U.S. Government consensus standard that a conditional risk management process should be implemented to ensure that mission rules do not induce unacceptable consequences when they are implemented.

Section 450.108(d)(6) requires that flight safety limits be designed to avoid flight abort that results in increased collective risk to the public in uncontrolled areas, compared to continued flight. This language is very similar to proposed § 450.123(b)(3), with one change. The FAA changes the term ''people'' in the proposed rule to ''the public'' in the final rule because the FAA regulates the safety of the public. The term ''people'' could be construed as meaning something broader than ''public,'' such as mission essential personnel who may be in uncontrolled areas.

Blue Origin stated that proposed §§ 450.123(d), 450.125(b)(2), 450.125(c), and 450.125(c)(3) were in conflict and commented on the definition of a ''useful mission.'' Blue Origin explained that, even though the intent was to meet the public safety requirements in proposed § 450.101, terminating a vehicle that may not meet the definition of a ''useful mission'' may result in an increase in risk to the public, including those on ships and aircraft, compared to continued flight that may result in reaching orbit. Blue Origin commented that, if the limits were defined only with respect to the risk criteria in proposed § 450.101, allowing the vehicle to continue flight may result in a safer risk profile.

The FAA agrees that the risk to the public must not be increased by flight abort. However, if a vehicle intended for orbit is outside the limits of a useful mission and approaching populated uncontrolled areas, there is likely an optimum location to abort the flight without increasing risk. For launches where the instantaneous impact point (IIP) [103] approaches a landmass from the ocean, aborting flight before the resulting debris would encroach on the landmass and dense coastal shipping traffic would be compliant with § 450.108(d)(6). Current practice for orbital launches from Federal launch sites is to allow the vehicle to continue to orbit if it can achieve a minimum safe orbit and is within the limits of a useful

[103] Section 401.5 has a long-standing definition of IIP: ''instantaneous impact point means an impact point, following thrust termination of a launch vehicle, calculated in the absence of atmospheric drag effects.''

mission in the IIP projection. This practice is consistent with the requirements in § 450.108. If an operator proposes to allow a vehicle outside the IIP limits of a useful mission to overfly population to proceed to orbit, it must demonstrate that this option presents lower risk than aborting the flight before the overflight begins.

The FAA agrees that a discrepancy existed in the NPRM in proposed § 450.123(d) but is uncertain if this is the conflict to which Blue Origin referred. The proposed § 450.123(d) referred to risk criteria in § 450.101, but mistakenly omitted the requirement to prevent debris capable of causing a casualty from impacting in uncontrolled areas if the vehicle is outside the limits of a useful mission. The option to determine the need for flight abort in real time as described in proposed § 450.123(d) does not appear in the final rule because it is just one means of meeting the requirements for flight safety limits. However, this does not preclude an operator from determining the need for flight abort entirely in real-time, as long as requirements in § 450.108 are met.

Section 450.108(d)(7)

As noted in the section on flight safety limits objectives, proposed § 450.125(c)(1) stated that flight safety limits would be required to be gated or relaxed where they intersect with a normal trajectory if that trajectory would meet the individual and collective risk criteria of proposed § 450.101(a)(1) and (a)(2) or (b)(1) and (b)(2) when treated like a nominal trajectory with normal trajectory dispersions. Proposed § 450.125(c)(2) stated that flight safety limits may be gated or relaxed where they intersect with a trajectory within the limits of a useful mission if that trajectory would meet the individual and collective risk criteria of proposed § 450.101(a)(1) and (a)(2) or (b)(1) and (b)(2) when treated like a nominal trajectory with normal trajectory dispersions.

In the final rule, § 450.108(d)(7) requires an operator to determine flight safety limits that ensure that any trajectory within the limits of a useful mission that is permitted to be flown without abort would meet the collective risk criteria of § 450.101(a)(1) or (b)(1) when analyzed as if it were the planned mission pursuant to § 450.213(b)(2).[104] The relocation of requirements in proposed § 450.125 to § 450.108(c)(2) through (c)(4) and § 450.108(d)(7) necessitated a revision to the language in § 450.108(d)(7). Section 450.108(d)(7) requires only that any trajectory within the limits of a useful mission that is permitted to be flown without abort would meet the collective risk criteria of § 450.101(a)(1) or (b)(1) when analyzed as if it were the planned mission pursuant to § 450.213(b)(2). As stated in the NPRM, the philosophy behind proposed § 450.125(c)(2) was to allow a non-normal flight to continue as long as the mission does not pose an unacceptable conditional risk given the present trajectory. The intent of § 450.108(d)(7) is similar but is stated in a different context than in the NPRM and also revised for clarity. In the final rule, the FAA removes the individual risk criterion from the requirement because the intent of the requirement was not to potentially create flight hazard areas along every azimuth within the limits of a useful mission wherever an individual risk contour exceeds 1×10^{-6}.

The FAA found that the phrase ''when analyzed as if it were the planned mission pursuant to § 450.213(b)(2)'' was more precise than ''when treated like a nominal trajectory with normal trajectory dispersions.'' A planned mission must be characterized with uncertainties and assessed for risk from planned events and reasonably foreseeable failure modes; therefore, trajectories must be within the limits of a useful mission that are permitted to be flown without abort, pursuant to § 450.108(d)(6).

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended replacing the terms ''normal trajectories'' and ''limits of a useful mission trajectories'' in proposed § 450.123(c) and § 450.125(c) with ''nominal trajectories.'' The FAA finds that such a change would restrict severely the allowable flight corridor of vehicles that could achieve a potentially useful mission by requiring that a vehicle be on a nominal trajectory to enter a period of materially increased public exposure in uncontrolled areas. As such, §§ 450.108(c)(3) and 450.108(d)(7) in the final rule allow vehicles within the limits of a useful mission to enter a period of materially increased public exposure in uncontrolled areas, provided the trajectory meets the collective risk requirement.

iv. End of Flight Abort

The FAA adds § 450.108(e) in the final rule, which states that a flight does not need to be aborted to protect against high consequence events in uncontrolled areas beginning immediately after critical vehicle parameters are validated, if the vehicle is able to achieve a useful mission and certain conditions are met for the remainder of flight. Specifically, the conditions which must be present are: (1) Flight abort would not materially decrease the risk from a high consequence event, and (2) there are no key flight safety events. Section 450.108(e) relieves the operator from the requirement to use flight abort in certain situations in which high consequence events are possible but would not be effectively mitigated by an FSS. This change responds to comments and addresses a common occurrence during a period of planned overflight of an uncontrolled area before orbital insertion.

Section 450.108(e) applies to a flight beginning immediately after critical vehicle parameters are validated, if the vehicle is able to achieve a useful mission. As discussed in the section on flight safety limits objectives, ''critical vehicle parameters'' are those parameters that demonstrate the vehicle is capable of completing safe flight through the upcoming phase of flight where population is exposed to hazardous debris effects from reasonably foreseeable failure modes. Due to the wide variety of launch and reentry vehicles that could be licensed, there is a wide variety of vehicle parameters that could be considered critical in this context. For example, recent state vector history data, as well as vehicle health indicators such as motor chamber pressure, generally will qualify as critical vehicle parameters.

Section 450.108(e) only applies when the following conditions are met. The first condition is that flight abort would not decrease the risk from a high consequence event materially as measured by CEC or other means identified through ELOS. The FAA expects that the requirement in § 450.108(e)(1) can be met by implementation of the current practices at the 45th SW, specifically, performing a comparison of the CE_C and E_C in uncontrolled areas with and without flight abort from each reasonably foreseeable failure mode in any significant period of flight during the subject phase of flight. If flight abort would not reduce the CE_C and E_C associated with each failure mode materially, then this condition is met.

[104] As part of pre-flight planning, an operator must submit to the FAA planned mission information, including the vehicle, launch site, planned flight path, staging and impact locations, each payload delivery point, intended reentry or landing sites including any contingency abort location, and the location of any disposed launch or reentry vehicle stage or component that is deorbited.

A material decrease would exclude any best estimate of the mean value that is already two orders of magnitude or more below the criteria in § 450.101(a) and (b). As the best estimate approaches the established limits in § 450.101(a) and (b) on the mean predicted values, a material decrease would be smaller, including: (1) Any reduction that brings the operation into compliance with § 450.101(a) and (b) limits, (2) any half-order of magnitude reduction in the best estimate of the mean value of E_C, or (3) a reduction by an amount at least as large as the coefficient of variation due to uncertainty in the population distribution. Section 450.108(e)(1) uses the phrase ''risk from a high consequence event'' deliberately so that other measures of collective risk and consequences, not just CE_C and E_C, can be considered in evaluating compliance with this requirement, absent a waiver. The FAA will provide guidance on what constitutes material decrease.

The second condition in § 450.108(e) requires that there are no key flight safety events for the remainder of flight. The FAA currently has a formal definition of the term ''key flight-safety event'' in part 437 (Experimental Permits). Section 437.3 states that key flight-safety event means a permitted flight activity that has an increased probability of causing a launch accident compared with other portions of flight. In addition, § 437.59(a) states that, at a minimum, a key flight-safety event includes: (1) Ignition of any primary rocket engine, (2) any staging event, or (3) any envelope expansion. The current description of key flight safety events in the permit regulation conveys what the FAA may consider a key flight safety event in the context of part 450.

Section 401.7 of the final rule has added a definition of ''key flight safety events'' and states that a key flight safety event means a flight activity that has an increased probability of causing a failure compared with other portions of flight. The term key flight safety event in the context of part 450 includes events that could compromise any safety-critical system, or otherwise increase the risk from high consequence events, such as events that subject a safety-critical system to environments at or near the maximum predicted environment.

SpaceX commented that launches that overfly major landmasses (*e.g.,* Europe, Africa, or South America) prior to orbital insertion would violate the CE_C requirement in proposed § 450.101(c) during overflight. SpaceX urged the FAA to update the regulation to clarify that an operator would not have to perform a CE_C analysis for the ''overflight'' phase of flight. SpaceX also recommended that the CE_C requirement apply only to vehicle response modes that are mitigated by the FSS.

The FAA acknowledges that some launches that overfly major landmasses prior to orbital insertion produce CE_C levels in excess of the 1×10^{-2} threshold and that flight abort will not mitigate the consequences associated with those failure modes. The FAA modifies the final rule to address such circumstances by adopting requirements proposed in the NPRM, such as § 450.125(c). Specifically, § 450.108(e) identifies conditions that, if met, demonstrate a high consequence event is sufficiently mitigated. These conditions are met generally by U.S. launches that overfly downrange landmasses prior to orbital insertion. Thus, the final rule includes specific provisions designed to allow the current practice where some launches proceed through a phase of flight, such as the downrange overflight of a major landmass just prior to orbital insertion, without additional protections against low probability, high consequence events.

The FAA finds that meeting the requirements in § 450.108(e) demonstrates sufficient protection against the probability of high consequence events, even though the CE_C may exceed the 1×10^{-3} or 1×10^{-2} thresholds during the subject phase of flight. The use of collective risk to determine acceptability of downrange overflight is consistent with current practice.

Blue Origin, CSF, and SpaceX commented that flight abort may actually increase risk during overflight where vehicle hazards cannot be contained. Even for vehicles that implement an FSS with a reliability of 0.999 at 95 percent, it would still be possible to fall into the highest risk bin and not improve a risk posture measured by CE_C.

The FAA agrees with the commenters. In the final rule in § 450.108(e), the FAA sets conditions that demonstrate that a high consequence event is sufficiently mitigated, including if flight abort in that phase of flight would not materially decrease the risk from a high consequence event.

vi. Flight Abort Rules

Proposed § 450.165(c) (Flight Commit Criteria) contained the requirements for flight abort rules. As explained in the NPRM, an operator would identify the conditions under which an FSS, including the functions of any flight abort crew, must abort the flight to ensure compliance with § 450.101. An operator would be required to abort a flight if a flight safety limit is violated or if some condition exists that could lead to a violation, such as a compromised FSS or loss of data.

In the final rule, the FAA revised and relocated the flight abort rules to § 450.108 consistent with the objective of consolidating relevant flight abort requirements into a single section in the final rule. In § 450.108(f), an operator must establish and observe flight abort rules that govern the conduct of launch and reentry.

Section 450.108(f)(1) requires that vehicle data required to evaluate flight abort rules must be available to the FSS under all reasonably foreseeable conditions during normal and malfunctioning flight. A similar requirement appeared in proposed § 450.165(c)(2), which required vehicle data necessary to evaluate flight abort rules to be available to the FSS across the range of normal and malfunctioning flight. The FAA adds ''under all reasonably foreseeable conditions'' to § 450.108(f)(1) to acknowledge that some conditions that prevent vehicle data from being available to evaluate flight abort rules might be unforeseeable and therefore unpreventable through planning and design.

Section 450.108(f)(2) describes when the FSS must abort flight, similar to proposed § 450.165(c)(3). Section 450.108(f)(2)(i) requires that the FSS must abort flight when valid, real-time data indicate the vehicle has violated any flight safety limit developed pursuant to this section. In the final rule, the FAA revised the language from proposed § 450.165(c)(3)(i) to add ''developed pursuant to this section'' because the flight safety limits requirements now appear in the same section as this flight abort rule.

As proposed in § 450.165(c)(3)(ii), the flight abort rules would have required the FSS to abort flight when the vehicle state approaches conditions that are anticipated to compromise the capability of the FSS and further flight has the potential to violate a flight safety limit.

Blue Origin commented that, while it is possible to write flight abort rules to account for specific cases, there was not currently a practical means of writing general rules that would abort flight when the vehicle state approaches conditions that could result in a compromise of the FSS for every circumstance proposed in § 450.165(c)(3)(ii). It also commented that the potential to violate a flight safety limit is vague and outside the capability of current generation autonomous FSS. Blue Origin

recommended the rule be reworded as ''the flight safety system must abort flight when the vehicle state approaches identified conditions from the system safety analysis that are anticipated to compromise the capability of the flight safety system and the flight safety system is required to contain the risk to an acceptable level (as analyzed in the flight safety analysis).''

In the final rule, the revised requirement in § 450.108(f)(2)(ii) adopts Blue Origin's recommendation to add ''identified'' before ''conditions that are anticipated to compromise the capability of the flight safety system.'' The FAA finds this addition reasonable because it avoids requiring protections against unknown conditions. As revised, § 450.108(f)(2)(ii) requires that the FSS must abort flight when the vehicle state approaches identified conditions that are anticipated to compromise the capability of the FSS and further flight has the potential to violate a flight safety limit. This requirement is used in conjunction with the flight safety limits objective in § 450.108(c)(5).

The FAA declines to adopt Blue Origin's recommendation to limit this requirement to the system safety analysis because a system safety analysis is not the only means to identify these conditions. For example, an FSS survivability analysis or a link analysis for a command destruct architecture may identify conditions anticipated to compromise the capability of the FSS. The FAA also does not adopt Blue Origin's recommendation to change § 450.165(c)(3)(ii) by replacing ''and further flight has the potential to violate a flight safety limit'' with ''and the flight safety system is required to contain the risk to an acceptable level (as analyzed in the flight safety analysis).''

The FAA finds an acceptable level of risk might be interpreted as only meeting collective and individual risk requirements, while flight safety limits must meet other requirements as described in § 450.108 in the final rule. The FAA recognizes that a real-time determination of whether a particular failure may evolve to reach a flight safety limit is not possible. The operator must determine in pre-flight analyses (system safety analysis, link analysis, etc.) which failure modes can compromise the capability of the FSS. The operator must then use FSA to determine if those failure modes can potentially violate a flight safety limit. If it finds a failure mode that can potentially violate a flight safety limit, the operator must develop flight abort rules that protect against those modes. If the ability to reach a flight safety limit via a particular failure mode is uncertain, the assumption should be made that it is possible during any phase of flight where flight abort is used as a hazard control strategy. This approach is consistent with acceptable methods of compliance with proposed § 450.165(c)(3)(ii).

Section 450.108(f)(2)(iii) requires that the FSS must abort flight in accordance with methods used to satisfy § 450.108(d)(3) if tracking data is invalid and further flight has the potential to violate a flight safety limit. This requirement is similar to proposed § 450.165(c)(3)(iii), which stated that the FSS must incorporate data loss flight times to abort flight at the first possible violation of a flight safety limit, or earlier, if valid tracking data is insufficient for evaluating a minimum set of flight abort rules required to maintain compliance with proposed § 450.101.

As noted in the discussion of flight abort constraints, the FAA has replaced proposed § 450.127, which contained requirements for a data loss flight time analysis, with the more performance-based approach in § 450.108(d)(3). Consistent with that change, the FAA revises the language in proposed § 450.165(c)(3)(iii) in final § 450.108(f)(2)(iii). Data loss flight times are not the only means of compliance with the performance-based requirement in § 450.108(d)(3) to account for the potential to lose valid data necessary to evaluate the flight abort rules. The FAA also removes the requirement to abort flight at the first possible violation of a flight safety limit, or earlier, if valid tracking data is insufficient for evaluating a minimum set of flight abort rules required to maintain compliance with proposed § 450.101. This statement was associated with implementation of data loss flight times, but the performance-based requirement in § 450.108(d)(3) will allow other methods of compliance that may not be consistent in all cases with the NPRM language in § 450.165(c)(3)(iii). The FAA will provide guidance on compliance with §§ 450.108(d)(3) and 450.108(f)(2)(iii). The FAA also does not adopt the proposed definition for ''data loss flight time'' in § 401.7 in the final rule. The relation between §§ 450.108(d)(3) and 450.108(f)(2)(iii) in the final rule is substantively the same as that between proposed §§ 450.127 and 450.165(c)(3)(iii).

The FAA removes proposed § 450.165(c)(1), which required that for a vehicle that uses an FSS, the flight abort rules must identify the conditions under which the FSS, including the functions of any flight abort crew, must abort the flight. These included proposed § 450.165(c)(1)(i), to ensure compliance with proposed § 450.101, and proposed § 450.165(c)(1)(ii), to prevent debris capable of causing a casualty from impacting in uncontrolled areas if the vehicle is outside the limits of a useful mission. The FAA finds this requirement to be unnecessary, as flight safety limits requirements and flight abort rules requirements are clearly stated in § 450.108(c) through (f). In addition, in the final rule the FAA does not adopt the proposed definition for ''flight abort crew'' in § 401.7 because the term is no longer used in the final rule.

Virgin Galactic commented that proposed § 450.165(c)(ii) seems unachievable for an operator with a nominal trajectory that meets E_C requirements but can result in debris outside of the controlled area. Virgin Galactic recommended deleting the requirement or excluding the requirement if E_C was met.

The FAA finds, based on the context of the comment, that Virgin Galactic meant to refer to proposed § 450.165(c)(1)(ii). The FAA acknowledges that a mission that flies over uncontrolled areas on the nominal trajectory cannot always prevent debris impacts on the uncontrolled area, but the requirement only applies to vehicles outside the limits of a useful mission. A nominal vehicle is on a useful mission; therefore, this requirement would not apply to the scenario in Virgin Galactic's comment. In the final rule, the intent of proposed § 450.165(c)(1)(ii) is covered in § 450.108(f)(2)(i).

The FAA removes the requirement proposed in § 450.165(c)(3)(iv) that a flight may continue past any gate established under proposed § 450.125 only if the parameters used to establish the ability of the vehicle to complete a useful mission are within limits. The replacement of proposed § 450.125 with performance-based requirements in § 450.108(c) and (d) makes this requirement unnecessary.

SpinLaunch commented that the FAA should simplify the proposed flight safety limits analysis (§ 450.123), gate analysis (§ 450.125), and time delay analysis (§ 450.129) regulations by stating that the safety analyses must address certain goals and relying on a training and evaluation structure to assure applicants are knowledgeable and capable of performing the analyses in a manner that sufficiently addresses those goals. The FAA revises the requirements in proposed §§ 450.123, 450.125, and 450.129 to be more

performance-based. However, the FAA does not agree that training applicants to be capable of performing the subject analyses is sufficient to ensure compliance with the regulations.

v. Application Requirements

Section 450.108(g) contains application requirements for flight abort. Section 450.108(g)(1) requires an applicant to submit a description of the methods used to demonstrate compliance with § 450.108(c), including descriptions of how each analysis constraint in § 450.108(d) is satisfied in accordance with § 450.115 (Flight Safety Analysis Methods). This rule is similar to proposed § 450.123(e)(1), which required that an applicant submit in its application a description of how each flight safety limit would be computed, including references to the safety criteria of proposed § 450.101.[105] The intent of the requirement in the final rule is similar to the proposal. However, the reference to § 450.101 is excluded in the final rule because not all flight safety limits objectives in § 450.108(c) refer directly to § 450.101.

Section 450.108(g)(2) requires that an applicant must submit in its application a description of how each flight safety limit and flight abort rule is evaluated and implemented during vehicle flight, including the quantitative criteria that will be used, a description of any critical parameters, and how the values required in § 450.108(c)(3) and 450.108(e) are identified. This provision is derived from three requirements in the NPRM. First, proposed § 450.123(e)(2) would have required an applicant to submit representative flight safety limits and associated parameters. Second, proposed § 450.125(d)(2) would have required an applicant to submit a description of the measure of performance used to determine whether a vehicle would be allowed to cross a gate without flight abort, the acceptable ranges of the measure of performance, and how these ranges were determined. Third, proposed § 450.165(d)(2)(i) would have required an applicant to submit, for flight abort rules, a description of each rule and the parameters that would be used to evaluate each rule.

As discussed earlier, the FAA has removed §§ 450.123 and 450.125 from the final rule and relocated the flight abort rules from § 450.165 to reflect a more performance-based approach to flight abort and allow greater flexibility than would have been possible under the flight safety limits analysis and traditional gate analysis proposed in the NPRM. Accordingly, the application requirements associated with those sections have been combined in § 450.108(g)(2) in the final rule. This approach improves organization and increases flexibility with regard to how an operator demonstrates compliance with § 450.108.

Section 450.108(g)(3) requires an applicant to submit a graphic depiction or series of depictions of flight safety limits for a representative mission, together with the launch or landing point, all uncontrolled area boundaries, the nominal trajectory, extents of normal flight, and limits of a useful mission trajectories, with all trajectories in the same projection as each of the flight safety limits. This rule is similar to proposed § 450.123(e)(4), which required that an applicant submit a graphic depiction or series of depictions of representative flight safety limits, the launch or landing point, all uncontrolled area boundaries, and vacuum IIP traces for the nominal trajectory, extents of normal flight, and limits of a useful mission trajectories.

The final rule clarifies that an applicant will need only to submit flight safety limits for a representative mission. Also, the FAA finds that the requirement for depictions of vacuum IIP trajectories would not be appropriate for flight safety limits in different projections (such as present position) and revises the final rule to require all trajectories in the same projection as each of the flight safety limits. This change will not result in an increased burden compared to the NPRM because the applicant would have to depict the trajectories in either case; the final rule simply states explicitly that the trajectories must be depicted in the appropriate projection.

Section 450.108(g)(4) requires an applicant to submit a description of the vehicle data that will be available to evaluate flight abort rules under all reasonably foreseeable conditions during normal and malfunctioning flight. This section is similar to proposed § 450.165(d)(2)(iii), which required an applicant to submit a description of the vehicle data that would be available to evaluate flight abort rules across the range of normal and malfunctioning flight. In the final rule, the FAA replaces ''across the range of normal and malfunctioning flight'' with ''under all reasonably foreseeable conditions during normal and malfunctioning flight'' to be consistent with language elsewhere in the regulation. It results in no increased burden on the operator from the application requirement proposed in the NPRM.

Microcosm requested clarification of proposed § 450.165(d)(2)(i) and (iii), which would require that the applicant submit, for flight abort rules, a description of each rule, and the parameters that would be used to evaluate each rule; and a description of the vehicle data that would be available to evaluate flight abort rules across the range of normal and malfunctioning flight.

The FAA provides the following examples in response to Microcosm's comment. An example of a flight abort rule would be a line on the Earth's surface that, when crossed by an IIP (the parameter), would trigger flight abort. In this example, the vehicle data would be position and velocity data necessary to compute the IIP, as provided by external (such as ground-based) or onboard sensors. The operator should consider the availability of this data during normal and malfunctioning flight and the effect on the operator's ability to evaluate the applicable flight abort rule—which in this example is that flight abort be initiated if the IIP crosses the line on the Earth's surface.

Another example would be an altitude versus downrange distance constraint. If the vehicle is outside of a range of altitudes as a function of the downrange distance, flight abort would be triggered. The ranges of altitudes and downrange distances are the parameters in this example. In this example, the vehicle data would be position data, similarly reported by external or onboard sensors.

Other examples of parameters used in flight abort rules could be chamber pressure, body rates, health and status of critical systems, etc. In the final rule, the requirements in proposed § 450.165(d)(2)(i) and (d)(2)(iii) are addressed by § 450.108(g)(2) and § 450.108(g)(4), respectively.

i. Flight Hazard Analysis (§ 450.109)

In the NPRM, the FAA proposed in § 450.109 that, unless an operator uses physical containment, wind weighting, or flight abort as a hazard control strategy, an operator would be required to perform and document a flight hazard analysis and continue to maintain it throughout the lifecycle of the launch or reentry system. As explained in the NPRM, the use of a flight hazard analysis to derive hazard controls would provide flexibility that does not currently exist under the prescriptive requirements in part 417 and is broadly consistent with the practice in parts 431 and 435.

[105] Section 450.115 addresses the scope and level of fidelity required for FSA methods. The level of fidelity must demonstrate that any risk to the public satisfies the safety criteria of § 450.101.

As proposed in § 450.109(a), the flight hazard analysis would need to identify, describe, and analyze all reasonably foreseeable hazards to public safety and safety of property resulting from the flight of a launch or reentry vehicle. Each flight hazard analysis would need to: (1) Identify all reasonably foreseeable hazards, and the corresponding vehicle response mode for each hazard, associated with the launch or reentry system relevant to public safety and safety of property; (2) assess each hazard's likelihood and severity; (3) ensure that the risk associated with each hazard would meet certain defined criteria; (4) identify and describe the risk elimination and mitigation measures required to satisfy the criteria; and (5) demonstrate that the risk elimination and mitigation measures would achieve the necessary risk levels through validation and verification.

In the final rule, the FAA revises § 450.109 by adding a new applicability paragraph (a) and by re-designating proposed § 450.109(a) through (e) as § 450.109(b) through (f).[106] The FAA adds an applicability paragraph in § 450.109(a) that applies to the use of a flight hazard analysis as a hazard control strategy to derive hazard controls for the flight, or phase of flight, of a launch or reentry vehicle. Hazards associated with computing systems and software are further addressed in § 450.141. This revised language reflects that performing a flight hazard analysis is included as one of the hazard control strategies in § 450.107(c) of the final rule.

Proposed § 450.109 included several provisions that required the flight hazard analysis to address hazards to property. For instance, the FAA proposed in the introductory language to § 450.109(a) that operators identify, describe, and analyze all reasonably foreseeable hazards to public safety and safety of property. The FAA proposed in § 450.109(a)(1) that an operator identify all reasonably foreseeable hazards, and the corresponding vehicle response mode for each hazard, associated with the launch or reentry system relevant to public safety and safety of property. The FAA also proposed in § 450.109(a)(3)(ii) that the likelihood of any hazardous condition that may cause major damage to public property or critical assets must be remote.

Blue Origin and Virgin Galactic commented on the property protection requirements in proposed § 450.109. Blue Origin acknowledged the FAA's statutory authority to protect property but noted that FAA regulations do not define property nor the criteria for the safety of property. Blue Origin also expressed concern that the requirements in § 450.109 extended to critical assets and property located in controlled areas. Blue Origin requested clarity on these issues. Virgin Galactic commented that the protection of property was a new requirement and also expressed concerns about the criteria requiring an operator to mitigate the likelihood of any hazardous condition that can cause a major property damage to ''remote.''

In response, the FAA has not adopted the requirement to identify, describe, and analyze all reasonably foreseeable hazards to property resulting from the flight of a launch or reentry vehicle. Although property protection is codified in current licensing requirements for reusable launch vehicles in § 431.35(c), launch and reentry operators have not in the past been required to account for hazards to property due to flight. However, the FAA retains in the final rule specific requirements for critical assets and property on orbit, which have specific safety criteria in § 450.101 and § 450.169, respectively. The FAA notes that the emergency response requirements in § 450.173(d), which address fire hazards, may also mitigate hazards to property. The FAA may address other property and property hazards in a future rulemaking if launch and reentry flight operations dictate such a need.

Blue Origin also recommended proposed § 450.109(a) be revised to require that a flight hazard analysis identify, describe, and analyze all reasonably foreseeable hazards to public safety and safety of critical assets and safety of property resulting from the flight of a launch or reentry vehicle.

The FAA declines to adopt this recommended language because, as discussed in the preamble section dedicated to critical assets, the FAA will determine whether an asset is critical in consultation with the entity responsible for the asset, and either the FAA or a Federal launch or reentry site will determine whether the proposed activity would expose critical assets to a risk of loss of functionality that exceeds the risk criterion in § 450.101(a)(4) or (b)(4), and convey any necessary constraints to the operator.

Virgin Galactic commented on proposed § 450.109(a)(1)(i) through (a)(1)(x) and noted the list of error sources, or very similar, shows up in four other locations: (1) § 437.55, (2) AC 431.35–2A, (3) FAA Flight Safety Handbook, and (4) the AIAA Safety Critical RLV guide. Virgin Galactic noted that the wording differed slightly from one source to another and recommended that the FAA harmonize the various lists. The FAA notes this comment is outside the scope of this rulemaking.

Proposed § 450.109(a)(3) stated that a flight hazard analysis must ensure that the risk associated with each hazard would meet the following criteria: (1) The likelihood of any hazardous condition that may cause death or serious injury to the public must be extremely remote; and (2) the likelihood of any hazardous condition that may cause major damage to public property or critical assets must be remote.

In the final rule, the FAA revises this requirement to remove the property protection requirement in proposed § 450.109(a)(3)(ii), as discussed earlier. Section 450.109(b)(3) states that a flight hazard analysis must ensure that the likelihood of any hazardous condition that may cause death or serious injury to the public is extremely remote.

Proposed § 450.109(a)(5) stated a flight hazard analysis must demonstrate that the risk elimination and mitigation measures would achieve the risk levels of proposed § 450.109(a)(3) through validation and verification. Verification includes analysis, test, demonstration, or inspection. The FAA adopts and re-designates proposed § 450.109(a)(5) as § 450.109(b)(5) in the final rule, with one revision. In § 450.109(b)(5), the FAA changes the term ''demonstrate'' in the introductory paragraph to ''document.''

Virgin Galactic noted that the NPRM used the term ''demonstrate'' as both part of the introductory paragraph in proposed § 450.109(a)(5) and as a verification method in proposed § 450.109(a)(5)(iii). Virgin Galactic commented that demonstration is a standard verification method, and use of the word in both places could drive confusion. Virgin Galactic recommended changing the term ''demonstrate'' in § 450.109(a)(5) to ''verify and validate'' to clarify that demonstration is not the only method of completing validation and verification.

The FAA agrees that the proposed language could cause confusion, and that demonstration is not the only method of completing validation and verification. The FAA changes ''demonstrate'' to ''document'' to avoid that confusion. The FAA does not adopt Virgin Galactic's specific suggestion because ''verification'' and ''validation'' are terms used later in the sentence, and are defined in § 401.7.

Virgin Galactic commented on proposed § 450.109(c) and recommended that there be an exclusion

[106] The FAA changes the term ''vehicle response mode'' in proposed § 450.109(a)(1) to ''failure mode,'' consistent with similar changes throughout the final rule as discussed in the conditional expected casualty section of the preamble.

for vehicles that follow the same standard trajectory each flight.

The FAA disagrees with Virgin Galactic's recommendation. Even if an operator follows a stable trajectory, vehicle design changes or other operational changes may introduce new hazards. An operator must confirm that the flight hazard analysis is valid for each mission in order to ensure that all hazards are identified and mitigated to an acceptable level. That said, the FAA expects that operators with stable vehicle designs and operations will typically not have major updates to their flight hazard analyses.

The FAA re-designates proposed § 450.109(d) as § 450.109(e) in the final rule, and removes the term ''operational'' to reflect that an operator must continually update the flight hazard analysis throughout the lifecycle of the launch or reentry system, rather than just address operational changes. As discussed in the preamble discussion on the system safety program (§ 450.103), design and operational changes to a system can have an impact on public safety.

Virgin Galactic commented that the term ''continually'' in § 450.109(d) is not defined and is vague. In addition, Virgin Galactic noted that the requirement appears to duplicate the current continuing accuracy requirements in part 413 and the proposed continuing accuracy requirements in proposed § 450.211. Virgin Galactic recommends this requirement be removed.

The FAA notes that, for the purposes of the flight hazard analysis, ''continually'' means that the operator must update the flight hazard analysis as aspects of the mission change or as new information is learned about an operation, if potential impacts to the analysis are identified. Although somewhat redundant with the requirement in § 450.211 for a licensee to maintain the continuing accuracy of representations in its application, proposed § 450.109(d) (re-designated § 450.109(e) in the final rule) provides the specific expectation that the flight hazard analysis must be complete and all hazards must be mitigated to an acceptable level for every launch or reentry.

SpinLaunch commented that the requirements in proposed § 450.109(c) and (d) were an onerous burden, and that to achieve a regulatory framework that can effectively and efficiently oversee multi-site, multi-vehicle operations, a shift away from the traditional regulatory verification of each component to a more practical method would be necessary. SpinLaunch recommended that an applicant just demonstrate knowledge and skills to perform safe and accepted operations.

Operators have a responsibility to ensure that public safety analyses are consistent with their proposed operations and that all hazards are mitigated to an acceptable level. This practice is consistent with system safety practices and current commercial space regulations. The framework recommended by SpinLaunch would not achieve these public safety outcomes because it is too broad and lacks performance metrics.

In the final rule, the FAA re-designates proposed § 450.109(e) as § 450.109(f), (Application requirements). Except for number re-designations, the FAA adopts the requirements as proposed.

j. Physical Containment (§ 450.110)

As discussed earlier, unlike other hazard control strategies, the FAA did not propose a separate section for the physical containment hazard control strategy in the NPRM. Rather, proposed § 450.107(b) simply contained the requirements for physical containment as a hazard control strategy. The FAA proposed that, to use physical containment as a hazard control strategy, an operator would be required to ensure that the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area developed in accordance with proposed § 450.133 (Flight Hazard Area Analysis), and would be required to apply other mitigation measures to ensure no public exposure to hazards as agreed to by the Administrator on a case-by-case basis. In addition, proposed § 450.107(e) included specific application requirements for an operator using physical containment as a hazard control strategy; namely, that it must (1) demonstrate that the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area developed in accordance with § 450.133, and (2) describe the methods used to ensure that flight hazard areas are cleared of the public and critical assets.

In the final rule, the FAA places the requirements for the physical containment hazard control strategy in a separate section, § 450.110. With one exception, the proposed requirements are unchanged in the final rule. The one exception, as discussed next in response to a comment, is that the FAA clarifies that the hazard area must be clear of the public and critical assets.

As noted earlier in the discussion of § 450.107, Blue Origin commented that the FAA amend proposed § 450.107(e)(2)(ii), which proposed to require an applicant to describe the methods used to ensure that flight hazard areas are cleared of the public and critical assets, and to require that an applicant describe the methods used to ensure that risk to the public and critical assets in flight hazard areas meet allowable criteria. Blue Origin pointed out that critical assets cannot be cleared from a flight hazard area. In addition, Blue Origin stated that the proposed definition of ''flight hazard area'' in § 401.5 already captured that the area would be controlled to risk limits and that can be achieved through methods other than clearing the area.

The FAA disagrees with Blue Origin that proposed § 450.107(e)(2)(ii), now § 450.110(c)(2), should be amended to require an applicant to describe the methods used to ensure that risk to the public and critical assets in flight hazard areas meet allowable criteria, as opposed to ensuring that the area is cleared of the public and critical assets. Although Blue Origin is correct in noting that the definition of ''flight hazard area'' is not limited to clearing the area,[107] the physical containment hazard control strategy is designed to be a simple method of protecting public safety by launching within an area that is cleared of the public and critical assets, and within an area that contains hazards based on the potential energy of the vehicle. The FAA modifies what was proposed in § 450.107(b)(1) and (b)(2), now § 450.110(b)(1) and (b)(2), from what was proposed in the NPRM, to clarify that the hazard area must be clear of the public and critical assets.

The FAA also modifies the definition of ''flight hazard area'' in § 401.7 to change the language from ''in order to protect public health and safety and the safety of property'' to ''in order to ensure compliance with the safety criteria in § 450.101.'' The FAA makes this change to tie flight hazard areas to the safety criteria in § 450.101.

k. Wind Weighting (§ 450.111)

In the NPRM, the FAA proposed wind weighting requirements in § 450.141. As discussed earlier, the wind weighting requirements have been moved to § 450.111 in order to group all hazard control strategies together. Although the FAA did not receive any comments on this hazard control strategy, the FAA

[107] The proposed definition of ''flight hazard area'' in the NPRM was ''any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated in order to protect public health and safety and the safety of property.''

has made a few changes in the final rule.

In the applicability section, the FAA specifies that an operator may use wind weighting as a hazard control strategy to meet the safety criteria of § 450.101 to § 450.101(a), (b), and (c), which address launch risk criteria, reentry risk criteria, and high consequence event protection. The FAA makes this change because the criteria in § 450.101(d), (e), (f), and (g)—addressing disposal safety criteria, the protection of people and property on orbit, the notification of planned impacts, and the validity of analyses, respectively—are not relevant to wind weighting. Therefore, an operator does not need to demonstrate that wind weighting satisfies these requirements.

In the NPRM, proposed § 450.141(b) would require that for the flight of an unguided suborbital launch vehicle that uses a wind weighting safety system, the launcher azimuth and elevation settings must be wind weighted to correct for the effects of wind conditions at the time of flight to provide a safe impact location. The FAA has replaced ''to provide a safe impact location'' with ''to provide impact locations that will ensure compliance with the safety criteria in § 450.101.'' This change removes any ambiguity as to the meaning of ''safe impact location.''

Also in the NPRM, proposed § 450.141(b) would require that for the flight of an unguided suborbital launch vehicle that uses a wind weighting safety system, an operator must use launcher azimuth and elevation angle settings that ensures the rocket will not fly in an unintended direction given wind uncertainties. The FAA has replaced ''given wind uncertainties'' with ''accounting for uncertainties in vehicle and launcher design and manufacturing, and atmospheric uncertainties.'' This change acknowledges that the uncertainties that affect an unguided suborbital launch vehicle's ability to fly in an unintended direction are broader than just wind uncertainties—they include uncertainties in vehicle and launcher design and manufacturing, and other atmospheric uncertainties. The FAA makes two grammatical changes to the application requirements, which in the final rule are in § 450.111(e). First, in § 450.111(e)(2), the FAA replaces ''and identify'' with ''including.'' In § 450.111(e)(3), the FAA removes the word ''provide.''

Lastly, similar to other sections in this rule, the FAA removes the proposed requirement for an applicant to provide additional products that allow an independent analysis as requested by the Administrator because the requirement was redundant with § 450.45(e)(7)(ii).

l. Flight Safety Analysis (§§ 450.113 to 450.139)

Regardless of the hazard control strategy chosen or mandated, the FAA anticipates that an operator will be required to conduct an FSA for at least some phases of flight. For example, an FSA must determine flight hazard areas for any vehicle with planned debris impacts capable of causing a casualty. Also, an FSA must quantitatively demonstrate that a launch or reentry meets the safety criteria for debris, far-field overpressure, and toxic hazards. An operator may be required to conduct additional analyses to use flight abort or wind weighting hazard control strategies.

Generally, an FSA consists of a set of quantitative analyses used to determine flight commit criteria, flight abort rules, flight hazard areas, and other mitigation measures and to demonstrate compliance with the safety criteria in § 450.101. In the NPRM, the FAA proposed 15 sections associated with FSA requirements in §§ 450.113 through 450.141. The final rule moves requirements associated with flight safety limits to § 450.108, such that 11 interrelated sections remain component parts of an FSA.

There are 11 performance-based sections with FSA requirements that fall into three groups. The first group, §§ 450.113 and 450.115, provides requirements on the scope and fidelity of the analyses required by the remaining nine sections. The second group, which consists of five sections from § 450.117 through § 450.131, specifies the requirements for analyses necessary to develop quantitative input data used by the last four sections. The last group consists of four sections that specify quantitative risk analyses with products necessary to evaluate compliance with the safety criteria in § 450.101. All of the FSA sections must use methods that comply with § 450.101(g) because they are essential to demonstrating compliance with the safety criteria in § 450.101.

To aid in holistically understanding the substance of, and relationships between, the FSA sections, the following provides a brief overview, before a more detailed discussion of each FSA section. Section 450.113 specifies the overall scope of the subsequent analyses in terms of the period of flight for which the public risks must be quantified. For example, for an orbital launch, an FSA must account for all phases of flight from liftoff through orbital insertion and through all component impacts or landings. Section 450.115 specifies that the operator's analysis methods must account for all reasonably foreseeable events and failures of safety-critical systems during nominal and non-nominal launch or reentry that could jeopardize public health and safety, and the safety of property. Section 450.115 also specifies that the operator's methods must have a level of fidelity sufficient (1) to demonstrate compliance with the safety criteria of § 450.101, accounting for all known sources of uncertainty, using means of compliance accepted by the Administrator; and (2) to identify the dominant source of each type of public risk with a criterion in § 450.101(a) or (b) in terms of phase of flight, source of hazard (such as toxic exposure, inert, or explosive debris), and failure mode. An operator must comply with these foundational sections when performing any of the separate analyses that together comprise the FSA.

Sections 450.117 and 450.119 specify the constraints and objectives of analyses sufficient to characterize the trajectory of the vehicle during normal and malfunction flight. Section 450.121 specifies the constraints and objectives of an analysis sufficient to quantify the physical, aerodynamic, and harmful characteristics of hazardous debris, including impact probability distributions generated from normal and malfunction flight. Section 450.123 specifies requirements to characterize the population exposed to a significant probability of impact by hazardous debris, including the vulnerability of people in various structure types. Section 450.131 specifies requirements for statistically valid estimates of the probability of reasonably foreseeable failures based on the outcomes of previous flights. Depending on the type of operation or the hazard control strategy used, an operator may be required to perform some or all of these analyses in developing its FSA.

Finally, §§ 450.133, 450.135, 450.137, and 450.139 specify the requirements for quantitative risk analyses to demonstrate that the risks to the public from debris, far-field overpressure, and toxic hazards are consistent with the safety criteria in § 450.101. Generally, the analyses conducted under §§ 450.117 through 450.131 are used to inform the analyses for these final portions of the FSA. Flight commit criteria, flight hazard areas, flight abort rules, and other mitigation measures are typically derived as necessary to demonstrate compliance with the safety criteria in § 450.101, and thus are typical byproducts of the risk analyses

performed to satisfy the requirements in §§ 450.133, 450.135, 450.137, and 450.139. The requirements for each of the FSA sections are described in more detail in the following sections.

m. Flight Safety Analysis Requirements—Scope (§ 450.113)

In the NPRM, proposed § 450.113 stated the scope and applicability of FSA requirements. Proposed § 450.113(a), which covered scope, stated an operator would be required to perform and document an FSA: (1) For orbital launch, from liftoff through orbital insertion, and any component or stage landings; (2) for suborbital launch, from liftoff through final impact; (3) for disposal, from the beginning of the deorbit burn through final impact; (4) for reentry, from the beginning of the deorbit burn through landing; and (5) for hybrid vehicles, for all phases of flight, unless the Administrator determines otherwise based on demonstrated reliability. Proposed § 450.113(b), which covered applicability, identified what sections needed to be included in an FSA depending on the type of operation or hazard control strategy being used.

In the final rule, the FAA has removed the proposed applicability provision and adopted the scope provisions with some changes and reorganization. The FAA revised § 450.113(a) to state that an operator must perform and document an FSA for all phases of flight, except as specified in § 450.113(b). The FAA also revised § 450.113 to add in paragraph (b) an operator is not required to perform and document an FSA for a phase of flight if agreed to by the Administrator based on demonstrated reliability. An operator demonstrates reliability by using operational and flight history to show compliance with the risk criteria in § 450.101(a) and (b). Operational history includes the flight time and/or cycles of an aircraft, which may have an airworthiness certificate, operating under part 91, part 135 or part 121 as an example. Flight history could be represented by flight time accumulated through a period of developmental and flight tests of a vehicle that does not have an airworthiness certificate. Although the demonstrated reliability language was limited to hybrid vehicles in the proposed rule, the FAA is providing additional flexibility by expanding it to all vehicles. Some vehicles other than hybrids could conceivably have an extensive and safe enough flight history to demonstrate compliance with the risk criteria in § 450.101(a) and (b) based on empirical data in lieu of the traditional risk analysis.

In the final rule, the FAA modifies § 450.113(a)(1), which addresses orbital launches, to clarify that an FSA covers from liftoff through orbital insertion and through ''all component impacts or landings'' instead of proposed ''any component or stage landings or final impacts.'' Likewise, for the scope of an FSA for suborbital launches, the FAA changes § 450.113(a)(2) to ''through all component impacts or landings'' instead of proposed ''through final impact.'' These changes reflect the reality that orbital and suborbital launch vehicles often have multiple components that can either impact the Earth or land intact. An FSA should address all such impacts or landings.

The FAA modifies § 450.113(a)(4) for a similar reason. For the scope of a reentry analysis, the FAA changes § 450.113(a)(4) to include ''through all component impacts or landings'' instead of proposed ''through landing.'' This change reflects the reality that reentry vehicles often have multiple components that can either impact the Earth or land intact.

The FAA modifies § 450.113(a)(3) and (4) by replacing the term ''the beginning of the deorbit burn'' with ''the initiation of the deorbit.'' The FAA notes not all deorbit operations will include a ''burn.'' The FAA notes that, for a disposal, an operator could discontinue the analysis prior to final impact and demonstrate an equivalent level of safety by presenting evidence of complete demise due to aerothermal heating. The scope of the FSA is consistent with the risk criteria in § 450.101 and the long-standing definition of ''reentry'' in § 401.7. The FAA clarifies here that, for the purposes of the FSA and risk criteria, the initiation of the deorbit for a reentry or disposal from orbit generally coincides with the final health check prior to the final command to commit the vehicle to a perigee below 70 nautical miles.

The final rule removes the language proposed in § 450.113(b) covering applicability, because the reorganization of the flight abort related sections means that all FSA sections are applicable, unless otherwise agreed to by the Administrator based on demonstrated reliability. Instead, § 450.113(b) in the final rule addresses how an operator demonstrates reliability, as discussed.

n. Flight Safety Analysis Methods (§ 450.115)

In the NPRM, proposed § 450.115 outlined the methods for conducting FSA. The FAA did not receive comments on this proposal unique to this section.

In the final rule, the FAA adopts § 450.115 as proposed with one change. The term ''vehicle response mode'' is changed to ''failure mode'' to be consistent with the changes to this term made elsewhere in the final rule. Consistent with the NPRM, § 450.115(c)(4) requires that an FSA methodology must identify the evidence for validation and verification required by § 450.101(g), which addresses the required accuracy and validity of data and scientific principles. For example, the ''accounting for all known sources of uncertainty'' requirement specified in § 450.115(b)(1) must produce results consistent with or more conservative than the results available from previous mishaps, tests, or other valid benchmarks, such as higher-fidelity methods.

o. Trajectory Analysis for Normal Flight (§ 450.117)

In the NPRM, proposed § 450.117 (Trajectory Analysis for Normal Flight) set requirements for an FSA for normal trajectories. The proposed provision was meant to distinguish between variability in the intended trajectory and uncertainties due to random sources of dispersion such as winds and vehicle performance. The FAA explained that all FSAs depend on some form of analysis of the trajectory under normal conditions, otherwise known as a normal trajectory. That is, a vehicle's trajectory when it performs as intended and under normal conditions must be understood to determine the effects of malfunctions along its flight path.

Proposed § 450.117(a)(1) required an FSA to include a trajectory analysis that established, for any phase of flight within the scope of proposed § 450.113(a), the limits of a launch or reentry vehicle's normal flight as defined by the nominal trajectory, and sets of trajectories sufficient to characterize variability and uncertainty during normal flight. First, proposed § 450.117(a)(1)(i) required a set of trajectories to characterize vulnerability. This set would be required to describe how the intended trajectory could vary due to the conditions known prior to initiation of flight. Second, proposed § 450.117(a)(1)(ii) required a set of trajectories to characterize uncertainty. This set would be required to describe how the actual trajectory could differ from the intended trajectory due to random uncertainties. The FAA also proposed to require an FSA to include a trajectory analysis establishing a fuel exhaustion trajectory in proposed § 450.117(a)(2) and, for vehicles with an

FSS, trajectory data or parameters that describe the limits of a useful mission in proposed § 450.117(a)(3).

In the final rule, the FAA adopts proposed § 450.117 with revisions. The FAA makes clarifying changes for a number of requirements regarding trajectory analysis; removes and relocates the fuel exhaustion trajectory requirement to § 450.119; and removes and relocates references to ''limits of a useful mission'' to § 450.119. The FAA also makes changes to remove prescriptiveness in favor of more performance-based language.

Boeing, Lockheed Martin, Northrop Grumman, Sierra Nevada, and ULA recommended changing the term ''normal'' flight to ''nominal'' flight in numerous parts of proposed § 450.117. The FAA does not agree with this recommendation because both of these terms are defined by the FAA and are distinct. Section 401.7 defines ''nominal'' to mean, in reference to launch vehicle performance, trajectory, or stage impact point, a launch vehicle flight for which all vehicle aerodynamic parameters are as expected, all vehicle internal and external systems perform as planned, and there are no external perturbing influences other than atmospheric drag and gravity. Section 401.7 defines ''normal flight'' to mean the flight of a properly performing vehicle whose real-time vacuum IIP does not deviate from the nominal vacuum instantaneous impact point by more than the sum of the wind effects and the three-sigma guidance and performance deviations in the uprange, downrange, left-crossrange, or right-crossrange directions. Thus, in simple terms, a nominal trajectory is a single trajectory that the vehicle would fly in the absence of wind effects and guidance and performance variability. Section 401.7 defines ''normal trajectory'' to mean ''a trajectory that describes normal flight.'' The FAA retains the definitions of these terms. It is virtually impossible for flights to be nominal such that all aerodynamic parameters and systems are as expected without the influence of any uncertainties. To replace ''normal'' with ''nominal'' would substantively change the meaning of the rule, as uncertainty does not apply to a nominal trajectory. Requiring normal flight trajectories is a more permissive range of trajectories than nominal flight and allows the rule to be performance based within safe parameters. The FAA retains the use of the terms as proposed.

In the final rule, the FAA narrows the scope of the set of trajectories to characterize uncertainty due to random uncertainties ''in all parameters with a significant influence on the vehicle's behavior through normal flight'' in § 450.117(a)(2). Generally, the FAA considers ''a significant influence'' to include any parametric uncertainties within three-sigma that affect the crossrange IIP location or downrange IIP rate by at least one percent because the IIP location and rate is often a convenient surrogate for the potential impact locations of hazardous debris. One percent is a typical threshold value used in RCC 321–20 Standard and Supplement. Thus, the final rule does not intend for applicants to characterize the influence of all random uncertainties or variability, but only those with a significant influence on the potential impact locations for hazardous debris.

The FAA removes the NPRM requirements for a fuel exhaustion trajectory in proposed § 450.117(a)(2) and its associated application requirement in proposed § 450.117(d)(3)(ii). The requirements for this analysis are more appropriately located in the malfunction flight section because a fuel exhaustion trajectory is a malfunction trajectory that results when thrust termination does not occur as planned. A fuel exhaustion trajectory is not always required; however, such an analysis could be necessary for certain operations. For example, a fuel exhaustion trajectory will be necessary under the final rule § 450.119(a)(2) for a return to launch site scenario. As a result of this removal, the FAA combines proposed § 450.117 paragraph (a) with paragraph (a)(1) as a new paragraph (a), and re-designates proposed § 450.117(a)(1)(i) and (a)(1)(ii) as § 450.117(a)(1) and (a)(2), respectively.

The NPRM referenced the limits of a useful mission in proposed § 450.117(a)(3). In the final rule, the FAA moves all references to the limits of a useful mission from § 450.117, including proposed § 450.117(a)(3), to § 450.119 (Trajectory Analysis for Malfunction Flight). The FAA finds that the requirements associated with the limits of a useful mission belong in the malfunction flight section because limits of a useful mission can exceed the bounds of normal flight.

The FAA received several comments on the proposed use of the term ''limits of a useful mission.'' A summary of the comments and FAA's responses can be found in the preamble section on Trajectory Analysis for Malfunction Flight.

The FAA adopts § 450.117(b) as proposed. A final trajectory analysis must use a six-degree of freedom trajectory model to satisfy the requirements of § 450.117(a). The FAA did not receive comments on this proposal.

Proposed § 450.117(c) would have required a trajectory analysis to account for all wind effects including profiles of winds that are not less severe than the worst wind conditions under which flight might be attempted and for uncertainty of the wind conditions. In the final rule, the FAA revises the requirement to state that a trajectory analysis must account for ''atmospheric conditions that have an effect on the trajectory'' rather than ''all wind effects.'' The FAA notes that the revision captures the intent of (1) the proposed requirement to account specifically for wind effects under all foreseeable conditions within the flight commit criteria and consistent with the flight abort rules, and (2) the proposed requirement in § 450.117(a) to establish sets of trajectories sufficient to characterize variability and uncertainty during normal flight.

The FAA recognizes that wind is the primary atmospheric consideration for most vehicles, but, for some (non-traditional) vehicles, other atmospheric parameters such as density, humidity, or temperature may affect trajectory and be part of the flight commit criteria. Although these other conditions would have necessarily been accounted for in the trajectory analysis for normal flight as ''uncertainties'' in the introductory language to § 450.117(a), the final rule expressly refers to all atmospheric conditions in § 450.117(c). The FAA also notes that flight in the context of this section refers to the period of launch or reentry within the scope of § 450.113.

Boeing commented that it is impossible to account for all wind effects, as wind models were local and limited in altitude. Boeing recommended incorporating an altitude limit of 60,000 feet, and modifying the requirement to state, ''a trajectory analysis must account for launch and, if different, reentry site wind effects, as applicable, including profiles of winds that are no less severe than the worst wind conditions under which flight might be attempted, and for uncertainty in the wind conditions.''

The FAA notes that the proposed requirement concerning wind effects, revised to ''atmospheric effects'' in the final rule, specifies profiles under which flight may be attempted based on the launch commit criteria and flight abort rules. The NPRM and the final rule set performance level requirements that avoid placing an arbitrary altitude limit that may not encompass all the conditions that may have an effect on a

normal trajectory. Accordingly, the final rule requires a trajectory analysis to account not for all wind effects, but instead for atmospheric conditions that have an effect on the trajectory, including any uncertainty. Accounting for atmospheric effects on the trajectory will be addressed in guidance.

Blue Origin stated the requirements in proposed § 450.117(b) through (d)(2) amount to translating complex vehicle trajectory models into verbiage for delivery to FAA for licensing. Blue Origin proposed revising the language to specify vehicle state vector parameters in terms of position, attitude, velocity, thrust, and mass. In terms of a statistical distribution of each parameter, Blue Origin recommends providing a covariance matrix describing vehicle guidance and performance uncertainty as meeting the intent of the requirement.

The FAA notes Blue Origin's recommendation to specify the vehicle's position and velocity during normal flight using covariance matrices would satisfy the requirement in § 450.117(a)(2) because that approach was identified in Appendix A to part 417 under A417.7(g)(7)(xiii). The approach in Appendix A to part 417 under A417.7(g)(7)(xiii) meets the requirement in § 450.117(a)(2) because a set of covariance matrices for the vehicle position coordinates and velocity component magnitudes are an acceptable means to describe how the actual trajectory could differ from the intended trajectory due to random uncertainties in all parameters with a significant influence on the vehicle's behavior throughout normal flight. However, the FAA recognizes that other approaches, including a sufficiently large [108] set of Monte Carlo sample trajectories,[109] may also satisfy the requirement. The FAA does not intend to prescribe a specific method to characterize normal flight. Therefore, the FAA declines Blue Origin's recommendation to revise the requirement to specify vehicle state vector and covariance parameters. Instead, the final rule implements performance-based trajectory analysis requirements as proposed, such that an applicant must submit a description of the methods and input data used to characterize the vehicle's flight behavior throughout normal flight.

The FAA proposed application requirements for trajectory analysis for normal flight in § 450.117(d). In the final rule, the FAA adopts proposed § 450.117(d) with revisions. Specifically, the FAA removes the proposed requirement to describe the methodology used to determine the limits of a useful mission in § 450.117(d)(1). Instead, an equivalent requirement appears in § 450.119(c)(2) of the final rule. The FAA also removes the items proposed in § 450.117(d)(1)(i) through (d)(1)(iv) because they were redundant with the performance-based requirements that apply to all FSA in accordance with § 450.115(c).[110] The FAA removes the prescriptive requirements in § 450.117(d)(2)(ii) through (d)(2)(iv) proposed in the NPRM because these requirements are captured with the final rule requirement in § 450.117(d)(2), as explained later in this preamble section. In addition, the FAA re-designates proposed § 450.117(d)(2)(i) as (d)(3), and 450.117(d)(3) as (d)(4) with a minor revision. The FAA removed proposed § 450.117(d)(4), which required an applicant to submit additional products that allow an independent analysis, as requested by the Administrator, because the requirement was redundant with § 450.45(e)(7)(ii).

In the NPRM, proposed § 450.117(d)(2) required an applicant to submit a description of the input data used to characterize the vehicle's flight behavior throughout normal flight and limits of a useful mission. The proposal would have required a description of the wind input data, including uncertainties (§ 450.117(d)(2)(ii)); a description of the parameters with a significant influence on the vehicle's behavior throughout normal flight, including a quantitative description of the nominal value for each significant parameter throughout normal flight (§ 450.117(d)(2)(iii)); and a description of the random uncertainties with a significant influence on the vehicle's behavior throughout normal flight, including a quantitative description of the statistical distribution for each significant parameter (§ 450.117(d)(2)(iv)).

Commenters asserted these proposed requirements were too prescriptive, and the FAA agrees. The FAA revises § 450.117(d)(2) to require an applicant to submit the quantitative input data, including uncertainties, used to model the vehicle's normal flight in six degrees of freedom. This revision in the final rule captures the parameters of the proposed requirements in § 450.117(d)(2)(ii) through (d)(2)(iv), while allowing for more flexibility in the application of the regulatory requirements. Quantitative input data used to model the vehicle's normal flight in six degrees of freedom includes comprehensive sets of aerodynamic and mass properties. Explanation and details on how to comply with these requirements will be included in Advisory Circular 450.117–1, ''Trajectory Analysis.''

The FAA retains the requirement proposed in § 450.117(d)(2)(i) and re-designates it as § 450.117(d)(3) in the final rule. In addition, the FAA changes the term ''wind effects'' to ''atmospheric effects'' to be consistent with § 450.117(c) of the final rule.

The FAA revises proposed § 450.117(d)(3) as discussed in this paragraph and re-designates it as § 450.117(d)(4) in the final rule. The proposal required an applicant to submit representative normal flight trajectory analysis outputs, including the position, velocity, and vacuum IIP, for each second of flight. Blue Origin commented that this requirement created an unnecessary burden to calculate vacuum IIP for potentially hundreds or thousands of normal and malfunction vehicle trajectories. Blue Origin stated that vacuum IIP was not representative of where vehicle hazards may impact the Earth and believed this requirement should only apply to the nominal trajectory.

The FAA disagrees that the IIP application requirement would have created an unnecessary burden; however, the final rule removes the application requirement because vacuum IIP can be readily computed if necessary from the position and velocity vectors, which are a part of the application materials. In the final rule, § 450.117(d)(4) specifies that the representative normal flight trajectory analysis outputs include orientation of the vehicle in addition to the position and velocity data specified in the proposal. The FAA notes that orientation is inherent in any six-degree of freedom trajectory model, as required by both the proposed and final § 450.117(b). Orientation is important to

[108] The FAA will determine what constitutes a sufficiently large set of Monte Carlo trajectories pursuant to the level fidelity of analysis requirements in § 450.115(b).

[109] Monte Carlo methods include computational algorithms that, for example, repeatedly sample from probability distributions that characterize input parameters (such as the weight, thrust, and drag of a vehicle) and perform physics-based (such as Newton's laws) simulations to obtain numerical results (such as a set of trajectories that characterize flight under normal or malfunction conditions).

[110] Section 450.115(c) requires an applicant to submit a description of the FSA methodology, including identification of: (1) The scientific principles and statistical methods used; (2) all assumptions and their justifications; (3) the rationale for the level of fidelity; (4) the evidence for validation and verification required by § 450.101(g); (5) the extent that the benchmark conditions are comparable to the foreseeable conditions of the intended operations; and (6) the extent that risk mitigations were accounted for in the analyses.

public safety when the induced velocities have a preferred direction.

The FAA also removes the requirement proposed in § 450.117(d)(3)(ii) that applies to fuel exhaustion trajectory under otherwise nominal conditions, because a fuel exhaustion trajectory is merely one specific type of malfunction trajectory and is not necessarily required for all applicants. For example, a fuel exhaustion trajectory would be necessary under the final rule for a return to launch site scenario but not for a typical unguided suborbital rocket. The requirement in § 450.119(a)(2) of the final rule is used to determine whether an applicant must include a fuel exhaustion trajectory.

p. Trajectory Analysis for Malfunction Flight (§ 450.119)

In the NPRM, the FAA proposed requirements associated with trajectory analysis for malfunction flight in § 450.119. As stated in the NPRM, a malfunction trajectory analysis is necessary to determine how far a vehicle can deviate from normal flight. This analysis helps determine potential impact points in the case of a malfunction and is therefore a vital input for the analyses needed to demonstrate compliance with risk criteria.

In the final rule, the FAA adopts proposed § 450.119 with revisions. The FAA removes, as unnecessary, proposed § 450.119(a)(1), which required that an FSA include a trajectory analysis that establishes the vehicle's capability to depart from normal flight, formally defined in terms of IIP in § 401.7. Proposed § 450.119(a)(2) is re-designated (a)(1) and requires that a trajectory analysis establish the vehicle's deviation capability in the event of a malfunction during flight. The FAA adds a new requirement, designated as § 450.119(a)(2), which requires that an FSA must include a trajectory analysis that establishes the trajectory dispersion resulting from reasonably foreseeable malfunctions. This language retains the concept of proposed § 450.119(a)(1), but revises the regulatory language to allow for a medium-fidelity FSA approach (*e.g.,* corridor method) for which the vehicle vacuum IIP during a malfunction is not specified, as explained in the FAA's Flight Safety Analysis Handbook.[111] More specifically, the proposed requirement in § 450.119(a)(1) to establish the vehicle's capability to depart from normal flight would have required the analysis to account for the IIP in modeling of a malfunction trajectory because normal flight is defined in terms of IIP. Thus, the proposed requirement in § 450.119(a)(1) would have foreclosed a valid medium-fidelity FSA approach. In the final rule, § 450.119(a)(1) and § 450.119(a)(2) provide flexibility and permit at least one approach that allows a simpler computation of risk but still preserves safety. Not all operations are eligible for this corridor method, but it is valid when the vehicle debris risks are due to flight phases where the IIP is moving steadily downrange, and when the failure modes do not involve distorted impact distributions.[112] In the final rule, the FAA amended the requirement to allow this and other simplified methods for those operations for which they may be valid.

The FAA adds § 450.119(a)(3) in the final rule. Section 450.119(a)(3) states that an FSA must include a trajectory analysis that establishes, for vehicles using flight abort as a hazard control strategy under § 450.108, trajectory data or parameters that describe the limits of a useful mission. This requirement was found in § 450.117(a)(3) of the NPRM. The FAA finds that trajectory analysis requirements associated with the limits of a useful mission belong in the malfunction flight section because presumably normal flight can attain the one or more objectives within the flight azimuth limits.

The requirement in § 450.119(a)(3) is related to the requirement proposed in § 450.119(a)(1) because trajectories that are outside of the normal envelope can still be ''useful,'' even though they involve a malfunction.[113] The FAA notes that an operator can elect to designate the normal mission trajectories as the limits of a useful mission and meet the application requirement to submit data that describes the limits of a useful mission, but this may result in the termination of a flight that could still achieve a mission objective.

The FAA received several comments on the NPRM's proposal to use the ''limits of a useful mission'' to inform the development of flight safety limits and when flight abort was necessary, and to establish the width of a gate. Microcosm requested that the FAA define ''a useful mission.'' Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended changing the definition of ''limits of a useful mission'' to mean the trajectory or other parameters that bound performance of a mission that can attain its primary objective. Blue Origin disagreed with the addition of ''limits of a useful mission'' to the regulation and stated that regulating what is considered a useful mission was outside of the FAA's jurisdiction.

In the final rule, the FAA adopts a new definition of a ''useful mission'' in § 401.7 and amends the proposed definition of ''limits of a useful mission'' to mean the trajectory data or other parameters that bound the performance of a useful mission, including flight azimuth limits. A ''useful mission'' means a mission that can attain one or more objectives and is based on the definition of ''limits of a useful mission'' proposed in the NPRM. The definition of ''limits of a useful mission'' adopted in the final rule removes the language ''describe the limits of a mission that can attain the primary objective'' and replaces it with ''bound the performance of a useful mission,'' consistent with the commenters' recommendation. In this context, bounding the performance will include flight azimuth limits and could include limits on the altitude versus distance downrange or other physics-based limits depending on the nature of the operation. The FAA makes these changes because it recognizes that pursuit of objectives other than the primary objective may be considered a useful mission. However, when all other objectives can no longer be achieved the FAA does not consider the collection of data related to a failure in and of itself to be a useful mission. This is because mere failure data collection alone does not justify continued risk to the public. Therefore, the final rule states in § 450.119(a)(3) that the FAA does not consider the collection of data related to a failure to be a useful mission.

The FAA finds the requirements associated with ''useful mission'' and ''limits of a useful mission'' are central to the hazard control strategies. The FAA is not attempting to regulate what the operator or its customer considers a useful mission. The FAA instead is simply requiring that the applicant identify which missions are useful so that vehicles that fly outside of these parameters erroneously are not permitted to threaten the public. The FAA finds it necessary to include a

[111] *See* Flight Safety Analysis Handbook, V1.0, August 2009 (available at *https://www.faa.gov/about/office_org/headquarters_offices/ast/media/Flight_Safety_Analysis_Handbook_final_9_2011v1.pdf*).

[112] Distorted impact distributions are often caused by actions taken in response to abort criteria.

[113] Publicly available information indicates that the flight of the Ariane 5 VA241 that occurred from the Guiana Space Centre on January 25, 2018 may be a potential empirical example. There the flight path anomaly was evident from the beginning of flight and the payloads were deployed into an orbital inclination that was approximately 18 degrees from the intended orbit, yet the payloads were still able to deliver useful data.

requirement that would prevent a launch or reentry vehicle from continued flight that would increase risk to the public if that vehicle can no longer achieve an objective of the operator, outside of the collection of data related to a failure.

Blue Origin recommended replacing ''limits of a useful mission'' with ''limits to meet public risk criteria.'' The FAA does not agree with this recommendation. As described in the section on CE_C, public risk criteria alone are inadequate to establish the need for an FSS, the reliability of the FSS, or the timing of an FSS activation to ensure public safety. Similarly, while some might consider risk-based flight safety limits as a reasonable approach to risk management when a vehicle is on a potentially useful mission, once a malfunction results in a mission that can no longer achieve an objective, then hazard containment should be the goal and flight abort must be used to protect the public against high consequence events. Application of the limits of a useful mission benefits the operator because flights with trajectories that are outside of the normal envelope, but still useful according to the operator, will be permitted to continue without flight abort as long as they comply with § 450.108(d)(7), including trajectories that overfly the public. This was the intent of proposed § 450.123(b)(6) in the NPRM, and remains the intent of § 450.108(d)(7) in the final rule.

Boeing, Lockheed Martin, Northrop Grumman, and ULA commented that limits of a useful mission were already addressed in flight termination triggers, and that proposed § 450.117(a)(3) requiring trajectory data or parameters that describe the limits of a useful mission should be replaced with limits that trigger flight termination.

The FAA declines to adopt this recommendation because of the relationship between the limits of a useful mission and flight safety limits. Pursuant to § 450.108(c)(2) in the final rule (similar to proposed § 450.123(a)(2) of the NPRM), flight safety limits define when an operator must initiate flight abort to prevent continued flight from increasing public risk in uncontrolled areas if the vehicle is unable to achieve a useful mission. Under the final rule, flight safety limits will be developed after the limits of a useful mission are identified. An operator can elect to designate the normal mission trajectories as the limits of a useful mission and meet the application requirement to submit data describing the limits of a useful mission, but this may result in the termination of a flight that could still achieve a mission objective. As an example, during an operation for which a gate width was determined using only a vehicle's normal trajectory envelope, a failure before the gate resulted in the flight nearly being terminated at the gate, even though it went on to achieve the mission's primary objective. In that instance, if the limits of a useful mission data included flight azimuth limits, this vehicle would have had more margin in the form of a wider gate. Under the final rule, if an operator decides that placing a payload in any orbit or withholding abort for crewed flights is more useful than terminating a flight, it may declare that flight is useful at any azimuth or altitude and may fly the vehicle on any trajectory that meets § 450.108(d)(7). However, flight safety limits that terminate flights that are no longer useful should be placed so that they do not increase risk compared to continued flight, pursuant to § 450.108(d)(6).

The FAA found it necessary to move all references to the limits of a useful mission from § 450.117 to § 450.119 (Trajectory Analysis for Malfunction Flight), including proposed § 450.117(a)(3). The FAA finds that the requirements associated with the limits of a useful mission belong in the malfunction flight section because limits of a useful mission can exceed the bounds of normal flight.

In the NPRM, the FAA proposed in § 450.119(b) that a malfunction trajectory analysis must account for each cause of a malfunction flight, including software and hardware failures. For each cause of a malfunction trajectory, the analysis would have been required to characterize the foreseeable trajectories resulting from a malfunction. The proposal included six items in § 450.119(b)(1) through (b)(6) that would be required to be included in the analysis.

In the final rule, the FAA adopts proposed § 450.119(b) with revisions. The FAA removes proposed § 450.119(b)(1) through (b)(3) because they are no longer needed due to the adoption of performance-based standards and re-designates proposed § 450.119(b)(4) through (b)(6) as (b)(1) through (b)(3). Also, the FAA revises the introductory language in § 450.119(b) to improve clarity and remove prescriptive language.

Blue Origin commented that it was not feasible to model a malfunction turn trajectory for each software or hardware cause, only for vehicle responses to the cause as proposed in § 450.119(b). Blue Origin recommended striking the phrase, ''for each cause of a malfunction trajectory,'' and instead indicate that a malfunction trajectory analysis must characterize the foreseeable trajectories resulting from a malfunction.

The FAA partially agrees with Blue Origin's recommendations. The FAA deletes the proposed language in § 450.119(b), ''for each cause of a malfunction trajectory, the analysis must characterize the foreseeable trajectories resulting from a malfunction,'' but retains the phrase ''for each cause of a malfunction flight'' in the first sentence of § 450.119(b). The FAA notes the analysis must account for the probability of each set of trajectories that characterize a type of malfunction flight, and that probability must account for each cause of a malfunction flight, including software and hardware failures, for every period of normal flight.

The FAA notes that use of the phrase ''for each type of malfunction'' in § 450.119(b) of the final rule addresses Blue Origin's comment that it is not feasible to model a malfunction turn trajectory for each cause, but only for vehicle responses to the cause. The term ''each type of malfunction'' refers to the vehicle response to the cause and multiple causes could result in a similar vehicle response. For example, under part 417 a malfunction turn analysis would account for a series of ''tumble turns,'' as enumerated in Appendix A to part 417 under A417.9(d)(5), which result in the launch vehicle rotating due to a constant thrust vector offset angle. The FAA recognizes that there could be multiple causes for a constant thrust vector offset, such as a jammed mechanism, loss of electrical power, or loss of hydraulic fluid pressure. Thus, the probability of a tumble turn must account for ''each cause of a malfunction flight, including software and hardware failures,'' in accordance with § 450.119(b). Furthermore, the FAA recognizes that multiple sets of trajectories are necessary to characterize the vehicle behavior in response to a malfunction. An example is a malfunction that results in a constant thrust vector offset, because a range of thrust vector offsets is reasonably foreseeable (from very small angles that would cause a slow departure from normal flight up to the maximum feasible thrust offset that would typically result in a rapid tumble of the vehicle). Thus, there is a natural question regarding the appropriate resolution of the malfunction trajectory analysis. The intent of the requirements in § 450.119 is to produce sets of trajectories that are sufficient to characterize the public risks posed by each type of malfunction. Thus, the final rule sets a performance standard in § 450.119(b) that the analysis for each

type of malfunction must have sufficient temporal and spatial resolution to establish flight safety limits, if any, and individual risk contours that are smooth and continuous.

In order to be less prescriptive, the FAA further amends § 450.119(b) in response to Blue Origin's comment. The NPRM proposed in § 450.119(b)(1) through (b)(3) that the malfunction trajectory analysis must account for (1) all trajectory times during the thrusting phases, or when the lift vector is controlled, during flight; (2) the duration, starting when a malfunction begins to cause each flight deviation throughout the thrusting phases of flight; and (3) trajectory time intervals between malfunction turn start times that are sufficient to establish flight safety limits, if any, and individual risk contours that are smooth and continuous. The FAA removes proposed § 450.119(b)(1) through (b)(3) and consolidates these requirements into § 450.119(b). This revision sets more performance-based requirements for the scope and resolution of the malfunction trajectory analysis to create flexibility in demonstrating the trajectory dispersion resulting from reasonably foreseeable malfunctions. In the final rule, § 450.119(b) will require the analysis for each type of malfunction to have sufficient temporal and spatial resolution to establish flight safety limits, if any, and individual risk contours that are smooth and continuous.

In the NPRM, proposed § 450.119(b)(2) required that a malfunction trajectory analysis account for the duration, starting when a malfunction begins to cause each flight deviation throughout the thrusting phases of flight. Virgin Galactic commented that a malfunction turn analysis would not apply to operations for which a pilot is in control of a winged vehicle because the pilots act as an FSS.

The FAA is aware that having pilots onboard and in control of a vehicle during flight may mitigate the need for certain malfunction analyses; however, there may still be instances when pilots may become incapacitated during flight. In any such instances, a trajectory analysis for malfunction flight would still potentially be necessary to identify impact points as an essential input for risk analyses to demonstrate compliance with risk criteria in § 450.101. The FAA notes that flight simulators can facilitate the development of representative malfunction trajectory analysis outputs in cases in which pilot responses have a significant influence on the trajectory dispersion resulting from reasonably foreseeable malfunctions.

Virgin Galactic also recommended a wording change to § 450.119(b)(2) to define the duration as, ''starting when a malfunction begins . . . until such time the effects of the malfunction are mitigated.'' As previously discussed, the FAA does not adopt proposed § 450.119(b)(2) in the final rule. However, the FAA notes in the final rule, the combination of the requirement for sufficient temporal resolution to establish smooth and continuous individual risk contours, along with the requirement to account for the timing of each malfunction trajectory's termination due to means other than flight abort, including vehicle breakup, ground impact, or orbital insertion, provide a sufficient performance-based specification to establish the duration of the malfunction trajectory analysis. In addition, the FAA finds that the commenter's suggestion that the duration of the analysis continue only ''until such time the effects of the malfunction are mitigated'' would not analyze both the success and the failure of the mitigation necessary to quantify the risk and consequence in the event that the FSS fails.

As a result of removing proposed § 450.119(b)(1) through (b)(3), the FAA re-designates proposed § 450.119(b)(4) as § 450.119(b)(1) in the final rule. Proposed § 450.119(b)(4) required that a trajectory analysis for malfunction flight account for the relative probability of occurrence of each malfunction turn for which the vehicle is capable. In the final rule, the FAA revises § 450.119(b)(1) to reflect that the analysis must account for the relative probability of occurrence of each malfunction, and not specifically a malfunction turn. The FAA views the term ''malfunction turn'' as outdated. The requirement in the final rule is consistent with the proposal.

The FAA re-designates proposed § 450.119(b)(5) as § 450.119(b)(2) in the final rule. The FAA also revises § 450.119(b)(2) to correct an omission of the word ''trajectory.'' Furthermore, the FAA adds ground impact and orbital insertion as potential termination states. The FAA found the exclusion of these states in the NPRM to be a deficiency that would have resulted in an operator's inability to meet regulatory requirements for quantifying the risk because malfunctions can result in trajectories that result in ground impact or orbital insertion, as well as vehicle break-up, and those additional outcomes can pose significant public risks as well.

The FAA re-designates proposed § 450.119(b)(6) as § 450.119(b)(3) in the final rule and revises the requirements. Section 450.119(b)(3) requires that a malfunction trajectory analysis account for the parameters with a significant influence on a vehicle's flight behavior from the time when a malfunction begins to cause a flight deviation until each malfunction trajectory will terminate due to vehicle breakup, ground impact, or orbital insertion. The FAA adds the phrase ''parameters with a significant influence on vehicle's flight behavior'' because the analysis must account for these parameters to characterize sufficiently the vehicle's flight behavior. This language was proposed in the application requirements in § 450.119(c)(2)(iii) and has been added to paragraph (b)(3) in the final rule. The FAA received no comments on this language. The FAA also clarifies that a malfunction trajectory can terminate due to orbital insertion, not just ground impact or predicted structural failure (vehicle breakup), as specified in the NPRM, for the same reason that those outcomes were added to § 450.119(b)(2). Finally, the FAA replaces the proposed term ''predicted structural failure'' with the term ''vehicle break-up'' in the final rule. This change is consistent with the terminology used in § 450.121 (Debris Analysis).

Blue Origin commented that smooth and continuous contours were not typically feasible unless flight limits were also included in the malfunction turn analysis. Blue Origin also recommended adding flight abort to the list of vehicle end state conditions.

The FAA did not add flight abort to the list of vehicle end state conditions based on Blue Origin's comment because of the relationship between trajectory analysis for malfunction flight and risk analyses that produce risk contours. Risk analyses must consider outcomes of flight abort and FSS inaction, whether through failure of the FSS or because no flight abort rules were violated, which could result in vehicle breakup, ground impact, or orbital insertion. If the trajectories for malfunction flight were terminated when flight abort was predicted, no trajectory data would exist for cases when the FSS failed. The rule ensures that complete trajectory data exists to account for flight abort action and inaction in risk analyses. More specifically, ending the malfunction trajectories at the flight safety limits conflicts with the requirement in § 450.108(d)(5) to account for proper functioning of the FSS and failure of the FSS in individual, collective, and conditional risk evaluations. It was not necessary to amend the rule according

to Blue Origin's comment because flight abort is already a necessary end case to be analyzed when producing risk contours in accordance with § 450.133(e)(2)(iii), which is a separate analysis from producing trajectories for malfunction flight.

Section 450.119(b)(4) explicitly requires a malfunction trajectory analysis to account for potential FSS failure, if an FSS is used, because that can also influence the termination condition of a malfunction trajectory. For example, if a malfunction trajectory triggers a flight abort rule, potential outcomes of the trajectory are abort (through destruct, thrust termination, or other method) or continued flight resulting in aerodynamic breakup, intact impact, or orbital insertion if the FSS fails. The requirement in § 450.119(b)(4) is consistent with the proposal because both the proposed and final § 450.115(a) explicitly require that an operator's FSA method must account for all failures of safety-critical systems during nominal and non-nominal launch or reentry that could jeopardize public health and safety and the safety of property. Furthermore, any FSS required to comply with § 450.143 or § 450.145 necessarily will meet the definition of a safety-critical system. Therefore, the proposed requirement § 450.123(a) would have necessitated that the malfunction trajectory analysis account for the potential failure of the FSS.

In the NPRM, § 450.119(c) addressed the application requirements associated with trajectory analysis for malfunction flight. In the final rule, the FAA adopts the application requirements in proposed § 450.119(c) with revisions. The revisions include adding a new § 450.119(c)(2), re-designating proposed § 450.119(c)(2) through (c)(4), and removing proposed § 450.119(c)(1)(i) through (c)(1)(iv).

Proposed § 450.119(c)(1) required an applicant to submit a description of the methodology used to characterize the vehicle's flight behavior throughout malfunction flight. In the final rule, the FAA adopts the proposal and adds a reference to the requirements in § 450.115(c), which sets the standards for the methodologies used in the FSA. Also, the FAA removes the items proposed in § 450.119(c)(1)(i) through (c)(1)(iv) because they were redundant with the performance-based requirements that apply to all FSA in accordance with § 450.115(c).

In the final rule, a new § 450.119(c)(2) requires an applicant to submit a description of the methodology used to determine the limits of a useful mission, in accordance with § 450.115(c). This requirement was proposed as § 450.117(d)(1) in the NPRM. Moving this application requirement to § 450.119 is consistent with the relocation of its associated analysis requirement to § 450.119(a)(3). The FAA re-designates proposed § 450.119(c)(2) as § 450.119(c)(3) in the final rule. The FAA captures the requirements of proposed § 450.119(c)(2)(i) and (c)(2)(ii) and relocates them in § 450.119(c)(3)(i) and (c)(3)(ii).

The FAA re-designates proposed § 450.119(c)(2)(iii) as § 450.119(c)(3)(iii) in the final rule and revises the final § 450.119(c)(3)(iii) to specify the need for an applicant to submit a quantitative description of the parameters, including uncertainties, with significant influence on the vehicle's malfunction behavior for each type of malfunction flight characterized. Proposed § 450.119(c)(2)(iii) required an applicant to submit a description of the input data used to characterize the vehicle's malfunction flight behavior, including a description of the parameters with a significant influence on the vehicle's behavior throughout malfunction flight for each type of malfunction flight characterized. Proposed § 450.119(c)(2)(iii) also required a quantitative description of the nominal value for each significant parameter throughout normal flight. The FAA specifically replaces the proposed requirements in § 450.119(c)(2)(iii) and (c)(2)(iv) [114] with the requirement in § 450.119(c)(3)(iii) in the final rule. This revision retains the intent of the requirements proposed in the NPRM but is more flexible in its application because, although it still requires a quantitative description, the regulation permits something other than the statistical distribution that would have been required by the proposal.

The FAA re-designates proposed § 450.119(c)(3) as § 450.119(c)(4) in the final rule. The FAA also removes the need for the vacuum IIP for each second of flight. The FAA makes this change in response to Blue Origin's comment on computing vacuum IIP for a large number of trajectories, as addressed in the preamble section on § 450.117.

The FAA adopts the requirements in § 450.119(c)(4)(i) as proposed in § 450.119(c)(3)(i) in the NPRM. The FAA received no comments on proposed § 450.119(c)(3)(i). The FAA adopts, with revisions, the requirements in § 450.119(c)(4)(ii) as proposed in § 450.119(c)(3)(ii) in the NPRM. Proposed § 450.119(c)(3)(ii) required submission of the probability of each trajectory that characterizes a type of malfunction flight. Blue Origin commented that delivering probabilities for each trajectory modelled was not practical or useful for independent assessment. Instead, Blue Origin proposed revising the regulatory language to require the applicant to submit the probability of each set of malfunction trajectories. The FAA agrees with this comment and revises § 450.119(c)(4)(ii) in the final rule to reflect Blue Origin's recommendation.

In the final rule, § 450.119(c)(4)(iii) requires an applicant to submit a representative malfunction flight trajectory analysis output, including the position and velocity as a function of flight time for a set of trajectories that characterize the limits of a useful mission as described in § 450.119(a)(3) of this section. This requirement was proposed as § 450.117(d)(3)(v) in the NPRM. As discussed earlier, the FAA moves the limits of a useful mission requirement from proposed § 450.117 to § 450.119 in the final rule.

Lastly, similar to other sections in this rule, the FAA removes the requirement for an applicant to provide additional products that allow an independent analysis, as requested by the Administrator. The FAA finds the requirement redundant with § 450.45(e)(7)(ii). Blue Origin and the CSF objected to proposed § 450.119(c)(4). Blue Origin strongly disagreed that the FAA should be in the business of recreating analysis completed by operators. It submitted that the FAA should vet the process used by the operator to conduct the analysis, along with the products of the analysis, to determine whether approval was warranted. Blue Origin further stated that such independent recreation of the analysis could lead to protracted back and forth between an operator and the FAA that was unnecessary if the FAA had vetted the process used by the operator to conduct the analysis. Blue Origin proposed to delete this requirement in order to limit the scope to what was required to establish confidence in the validity of an operator's analysis. CSF stated that the FAA's practice of recreating an applicant's analysis should be ended, as it was expensive and burdensome. CSF recommended that an AC should guide and inform this analysis.

Virgin Galactic noted that numerous regulations under part 450, including proposed § 450.119(c)(4), call for additional products that allow an

[114] Proposed § 450.119(c)(2)(iv) required an applicant to submit a description of the random uncertainties with a significant influence on the vehicle's behavior throughout malfunction flight for each type of malfunction flight characterized, including a quantitative description of the statistical distribution for each significant parameter.

independent analysis, as requested by the Administrator. Virgin Galactic stated that ''additional products'' was neither defined nor constrained, permitting the FAA to request any information from operators at any time. This would create uncertainty regarding the kind of products an applicant or operator would need to prepare for the FAA. Virgin Galactic recommended striking the above references in their entirety. Virgin Galactic commented that, based on prior experience under part 431 with the FAA requesting additional information, these regulations may have a significant time and monetary impact on an operator, if implemented.

The FAA does not agree with the commenters' recommendation to delete this requirement in its entirety from the final rule. The goal is for the FAA to evaluate, in an efficient and thorough manner, the validity of an analysis, along with the products of the analysis submitted by an operator. The FAA finds that at times it may be necessary to conduct an independent analysis of the process used by the operator in order to ensure safety. Additional product requests under part 431 may have been more frequent due to a lack of well-defined application requirements. However, under part 450, the FAA expects the application requirements are sufficient and will generally not request additional products beyond those that are necessary to protect public safety. Furthermore, as noted in the NPRM, the FAA has evaluated the validity of an applicant's proposed methods by comparing the results to valid benchmarks such as data from mishaps, tests, or validated high-fidelity methods. Once that has occurred, the FAA can issue an operator's license for a repeatable operation at a specific site for a specified range of trajectory azimuths.

Using published benchmarks, the FAA intends to facilitate the validation and verification of FSA methods to alleviate some of the needs for the FAA to perform independent analyses. However, the FAA finds that relying on an approved process alone is insufficient when certain critical variables may change that affect flight safety or the MPL determination, or in cases in which the operator proposes launch or reentry operations that are so unique that relevant benchmarks are unavailable. Also, the FAA will continue to verify flight operations for new vehicles, for existing vehicles conducting operations at new sites, for vehicles flying a trajectory outside the accepted range of trajectory azimuths, and vehicles that have undergone significant modifications to vehicle design or flight safety critical systems. Thus, the FAA foresees continuing to perform independent analyses in certain circumstances to assure that it has met its statutory obligation to ensure public health and safety and safety of property.

Although the FAA declines to remove the ''additional products'' reference in § 450.45(e)(7)(ii) of the final rule, the FAA does not include the redundant references proposed in other sections. ''Additional products'' refers to data that will allow the FAA to conduct an independent safety analysis in support of its application assessment and licensing determination. It would be impractical to list everything needed for every independent analysis. As explained in the NPRM, the FAA's decision to conduct an independent analysis is usually reserved for new vehicle concepts, new analysis methods, or proposals involving unique public safety cases. In all instances, the request for information is bounded by the regulatory requirements for obtaining a license and the FAA's need to ensure compliance with the safety criteria. The FAA adopts the requirement that an applicant submit additional products to facilitate an independent analysis, as requested by the Administrator in § 450.45(e)(7)(ii).

q. Debris Analysis (§ 450.121)

The NPRM proposed in § 450.121 to require a debris analysis that characterized the debris generated for each foreseeable vehicle response mode as a function of vehicle flight time, accounting for the effects of fuel burn and any configuration changes. The proposal required that the debris analysis account for each foreseeable cause of vehicle breakup, including any breakup caused by an FSS activation or by impact of an intact vehicle. As noted in the NPRM, this would include debris from a vehicle's jettisoned components and payloads because such debris could cause a casualty due to impact with an aircraft or waterborne vessel or could pose a toxic or fire hazard.[115] Under proposed § 450.121(c), the debris analysis would include inert, explosive, and other hazardous vehicle debris from both normal and malfunctioning flight during launch or reentry.

In the final rule, the FAA adopts proposed § 450.121 with revisions. Specifically, the FAA preserves the scope of the debris analysis from the NPRM but consolidates, clarifies, and increases the flexibility of the regulations in this section. The final rule's revisions include (1) replacing the requirement to characterize the debris from ''each foreseeable vehicle response mode'' with ''debris generated from normal and malfunctioning vehicle flight,'' (2) relying upon a new definition for ''hazardous debris,'' (3) replacing ''flight time'' with ''flight sequence,'' and (4) removing prescriptive thresholds for various debris hazards in favor of a performance-based standard of ''capable of causing a casualty or loss of functionality to a critical asset.'' Each of these changes is discussed in the following paragraphs.

Proposed § 450.121(a) required that an FSA include a debris analysis that characterizes the debris generated for each foreseeable vehicle response mode as a function of vehicle flight time, accounting for the effects of fuel burn and any configuration changes. The NPRM noted that an operator's debris list generally changes over time with variations in the amount of available propellant and the jettisoning of hardware.

In the final rule, the FAA adopts proposed § 450.121(a) with revisions. The FAA replaces the proposed requirement to characterize ''the debris generated for each foreseeable vehicle response mode as a function of vehicle flight time, accounting for the effects of fuel burn and any configuration changes'' with a more flexible and performance-based requirement to characterize ''the hazardous debris generated from normal and malfunctioning vehicle flight as a function of vehicle flight sequence.''

Several commenters suggested changing the term ''foreseeable'' vehicle response modes in § 450.121(a) of the NPRM to ''credible'' vehicle response modes. The commenters stated that credibility was determined during the system safety analysis, and that the debris analysis should not have to include extremely improbable, non-credible failure modes.

The FAA does not agree that the term ''foreseeable'' should be replaced by the term ''credible'' in this section or throughout the final rule. The term ''foreseeable'' is used in § 431.35 and also commonly used in system safety; therefore, the FAA is not changing these references. The FAA finds that the term ''credible'' is unacceptably prone to errors in judgment whereas the term ''foreseeable'' is more readily discerned by analysis (*e.g.,* fault trees). With regard to § 450.121(a) of the final rule, the FAA adopts the more flexible and performance-based requirement recommended by the commenters to characterize the hazardous debris generated from normal and malfunctioning vehicle flight as a

[115] 84 FR 15383.

function of vehicle flight sequence. With the removal of the reference to ''each foreseeable vehicle response mode'' in § 450.121(a), the final rule standard for the scope is set by the language in § 450.115(a), specifically by the reference to reasonably foreseeable events. In addition, the resolution of the failure modes accounted for in the debris analysis is set by the level of fidelity necessary to comply with § 450.115(b). The FAA also notes that, in the context of § 450.121, reasonably foreseeable events that can generate hazardous debris during malfunctioning vehicle flight generally include engine/motor explosion, exceeding structural limits due to aerodynamic loads, inertial loads, aerothermal heating, and activation of a flight termination system.

In reference to the use of the term ''hazardous debris'' in § 450.121(a), the final rule in § 401.7 includes a definition of this term. Hazardous debris means any object or substance capable of causing a casualty or loss of functionality to a critical asset. Hazardous debris includes inert debris and explosive debris such as an intact vehicle, vehicle fragments, any detached vehicle component, whether intact or in fragments, payload, and any planned jettisoned bodies. This definition is based on proposed § 450.121(c)(1), which required a debris analysis to identify all inert debris that could cause a casualty or loss of functionality of a critical asset. The FAA clarifies that the clause ''whether intact or in fragments'' applies to the payload and jettisoned bodies as well.

The final rule's definition of ''hazardous debris'' facilitated streamlining in proposed §§ 450.113 through 450.139. For example, the term hazardous debris in § 450.121(a) establishes a performance-based threshold, which resulted in the elimination of the prescriptive debris thresholds proposed in § 450.121(c)(1)(i) through (v).[116] Section 450.121(a) retains the essential performance standards in proposed § 450.121(c)(1) and (c)(2) (*i.e.,* that the analysis must identify all inert and explosive debris capable of causing a casualty or loss of functionality to a critical asset), and allows operators to propose impact vulnerability models appropriate for the materials used in their licensed operations.

For example, recent research and development sponsored by the FAA demonstrates that the threshold kinetic energy capable of causing a casualty from a collision with a rigid object is substantially lower than for a collision with an object made of certain composite materials.[117] The FAA will provide an AC with valid debris impact thresholds, such as those proposed in § 450.121(c)(1)(i) and (ii). Thus, in the final rule, § 450.121(a) uses the definition of ''hazardous debris'' in a way that will enable those debris impact thresholds to be updated as appropriate based on future research and development. In addition, the definition of ''hazardous debris'' is used in § 450.121(a) in a way that replaces the relatively verbose requirement in proposed § 450.121(c) that ''a debris analysis must account for all inert, explosive, and other hazardous vehicle, vehicle component, and payload debris foreseeable from normal and malfunctioning vehicle flight.''

In summary, the final rule uses the performance-based definition of ''hazardous debris'' that currently equates to the same debris thresholds as proposed in the NPRM because ''hazardous debris'' means any object or substance capable of causing a casualty, including people in aircraft or waterborne vessels or loss of functionality to a critical asset. Thus, by relying on the definition of ''hazardous debris,'' the final rule retains the standard in proposed § 450.121(c) of debris capable of causing a casualty or loss of functionality to a critical asset and allows operators to propose impact vulnerability models appropriate for the materials used in their vehicle.

In the final rule, the FAA replaces the term ''flight time'' in § 450.121(a) with the more flexible term ''flight sequence'' because it is a better independent variable. For example, during a reentry operation, the transitions between phases of flight, which generally produce substantially different hazardous debris, such as prior to and after peak aero-thermal heating, can occur at widely variable flight times. Also, imparted velocities due to break-up typically correlate with propellant load better than flight time does. Therefore, the final rule uses ''flight sequence'' as a less prescriptive and more accurate independent variable. The FAA notes that the term ''sequence'' is used in the common meaning of the word, which is a series of related things or events, or the order in which things or events follow each other. The phrase ''as a function of vehicle flight sequence'' would naturally include ''accounting for the effects of fuel burn and any configuration changes,'' so the final rule deletes those elements of the proposed requirement as redundant.

In § 450.121(b) of the NPRM, the FAA proposed to require that the debris analysis account for each foreseeable cause of vehicle breakup, including any breakup caused by FSS activation, and for impact of an intact vehicle. Consistent with § 450.133(a)(4), this proposal included debris from a vehicle's jettisoned components and payloads because such debris could cause a casualty due to impact with an aircraft or waterborne vessel or could pose a toxic or fire hazard.[118]

Section 450.121(b) retains the requirement that a debris analysis account for each reasonably foreseeable cause of vehicle breakup and intact impact. As explained in the NPRM, this would include ''engine or motor explosion, or exceeding structural limits due to aerodynamic loads, inertial loads, or aerothermal heating.''[119]

In addition, the final rule requires an operator to account for vehicle structural characteristics and materials and energetic effects during break-up or at impact. Although these items would be necessary considerations in any debris analysis, the FAA has added them expressly in § 450.121(b). The requirement to account for energetic effects in § 450.121(b)(3) is consistent with the requirement in proposed § 450.135(d)(3)(iii) which addresses ''indirect or secondary effects such as bounce, splatter, skip, slide, or ricochet.''[120] Moreover, accounting for the fundamental physical phenomena identified in § 450.121(b)(2) of the final rule would logically be necessary to comply with the requirement in

[116] As proposed, an operator would have been required to include all debris that could impact a human being with a mean expected kinetic energy at impact greater than or equal to 11 ft-lbs; impact a human being with a mean impact kinetic energy per unit area at impact greater than or equal to 34 ft-lb/in2; cause a casualty due to impact with an aircraft; cause a casualty due to impact with a waterborne vessel; or pose a toxic or fire hazard.

[117] ''The crash test results and subsequent analysis strongly suggest that RCC-based thresholds are overly conservative because they do not accurately represent the collision dynamics of elastically-deformable sUAS with larger contact areas in comparison to the metallic debris analysis methods for high speed missiles on the national test ranges.'' Final Report for the FAA UAS Center of Excellence Task A4; UAS Ground Collision Severity Evaluation Revision 2, Arterburn et al, 2017. *http://www.assureuas.org/projects/deliverables/a4/ASSURE_A4_Final_Report_UAS_Ground_Collision_Severity_Evaluation.pdf.*

[118] The preamble to the NPRM stated that ''this proposal would include debris from a vehicle's jettisoned components and payloads because such debris could cause a casualty due to impact with an aircraft or waterborne vessel or could pose a toxic or fire hazard,'' but the proposed regulatory text did not include that specific language.

[119] 84 FR 15383.

[120] This language in proposed § 450.135(d)(3)(iii) is removed in the final rule, as discussed in the preamble associated with that section.

proposed § 450.135(d) to ''model the casualty area, and compute the predicted consequences of each reasonably foreseeable vehicle response mode.'' As explained in the NPRM, ''the casualty area and consequence analysis would be required to account for all relevant debris fragment characteristics.'' The characteristics of all relevant debris fragments, such as the size and kinetic energy at impact, depend on the three fundamental physical phenomena identified in the final rule.

As noted earlier, the NPRM proposed to require in § 450.121(c) that a debris analysis account for all inert, explosive, and other hazardous vehicle, vehicle component, and payload debris foreseeable from normal and malfunctioning vehicle flight. The NPRM also specified a set of items for which a debris analysis would be required to account, at a minimum. These items included highly specific and prescriptive debris thresholds requirements. With the addition of the hazardous debris definition, § 450.121 no longer requires a specific subsection establishing debris thresholds.

In the final rule, new § 450.121(c) contains requirements associated with the propagation of debris that are relocated from the proposed debris risk analysis requirements in § 450.135(b). Specifically, a debris analysis must compute statistically valid debris impact probability distributions. The propagation of debris from each predicted breakup location to impact must account for all foreseeable forces that can influence any debris impact location, and all foreseeable sources of impact dispersion, including, at a minimum: The uncertainties in atmospheric conditions; debris aerodynamic parameters, including uncertainties; pre-breakup position and velocity, including uncertainties; and breakup-imparted velocities, including uncertainties. The FAA notes that a quantitative description of the physical, aerodynamic, and harmful characteristics of hazardous debris is a prerequisite to compute statistically valid debris impact probability distributions and to quantify the risks to the public.

The propagation of debris is a physics-based analysis that predicts where debris impacts will occur given a debris event while the vehicle is in flight, such as jettison of a vehicle stage or an explosion. The FAA moves the requirements in proposed § 450.135(b) to § 450.121(c) because the computation of statistically-valid debris impact distributions naturally depends on the nature of the debris and the trajectory analysis products from §§ 450.117 and 450.119. Similarly, the final rule requirements in § 450.121(c) are nearly identical to those in proposed § 450.135(b), except that the final rule removes the term ''including uncertainties'' from the regulation. The FAA finds inclusion of this term to be superfluous, as accounting for foreseeable sources of impact dispersion naturally includes the uncertainties in the debris aerodynamic parameters, pre-breakup state vectors, and breakup-imparted velocities. The FAA notes that the debris analysis must compute statistically valid debris impact probability distributions of all hazardous debris to be consistent with the scope identified in § 450.121(a).

Virgin Galactic recommended that the FAA allow operators to provide their own assessments of casualty causing debris. The FAA agrees that the specific impact vulnerability thresholds specified in the NPRM were overly prescriptive and potentially overly conservative for some non-rigid debris impacts. Thus, the final rule removes these proposed requirements in § 450.121(c) entirely.

In the NPRM, § 450.121(d) provided the debris analysis application requirements. In the final rule, the FAA relocates and revises proposed § 450.121(d)(1), which was a requirement to submit a description of the debris analysis methodology, to § 450.121(d)(2). The FAA re-designates and revises proposed § 450.121(d)(2) as § 450.121(d)(1) in the final rule. In the NPRM, proposed § 450.121(d)(2) required an operator submit a description of all vehicle breakup modes and the development of debris lists. In the final rule, the re-designated § 450.121(d)(1) makes use of the formal definition of ''hazardous debris,'' requiring a description of all scenarios that can lead to hazardous debris.

In the final rule, § 450.121(d)(2) and (d)(3) require an operator to submit a description of the methods used to perform the vehicle impact and breakup analysis in accordance with § 450.115(c), which is consistent with similar changes in other FSA sections. The final rule also moves the requirements relevant to the debris propagation analysis from proposed § 450.135(e)(2) and (e)(5) to § 450.121(d)(3) and (d)(4).

The FAA re-designates and revises proposed § 450.121(d)(3) as § 450.121(d)(5). In the NPRM, proposed § 450.121(d)(3) required an applicant to submit all debris fragment lists necessary to describe the physical, aerodynamic, and harmful characteristics of each debris fragment or fragment class quantitatively. Section 450.121(d)(5) of the final rule requires a quantitative description of the physical, aerodynamic, and harmful characteristics of hazardous debris. The FAA finds that ''quantitative description'' will allow alternative approaches for the applicant to demonstrate compliance with this section.

Virgin Galactic stated the proposal would introduce additional workload to the company. Virgin Galactic raised concern that proposed § 450.121 introduced requirements for waterborne vessels that were not referenced in other parts of the rule. The NPRM proposed, and the final rule requires in § 450.133(b), that a flight hazard area analysis must determine waterborne vessel hazard areas. Also, the NPRM preamble explained that the requirement includes people on ships in the collective risk computation (see proposed § 450.101(a)(1) and (b)(1)), and thus explicitly allows the application of risk management principles to protect people on waterborne vessels. The FAA finds that the scope of the FSA requirements in the final rule are consistent with current practice and will not introduce additional workload.

Virgin Galactic stated that the FAA should quantify the debris that could cause a casualty on a waterborne vessel. The FAA notes that it provided guidance on debris thresholds for waterborne vessels in Table 10 of the draft AC on High-Fidelity FSA published with the NPRM.

r. Population Exposure Analysis (§ 450.123)

In the NPRM, the exposure model requirements were addressed in the debris risk analysis section in proposed § 450.135(c) and (d) because a complete risk analysis must account for the distribution of people and how those people may be sheltered. The FAA received numerous comments stating the proposed requirements were too prescriptive. The FAA agrees and has revised the requirements to be more performance-based.

In the final rule, the FAA revises the exposure model requirements and moves them from proposed § 450.135(c) and (d) to § 450.123 (Population Exposure Analysis). The FAA moves the population exposure analysis requirements out of the proposed debris risk analysis section because this analysis informs other sections of the FSA. A population exposure analysis must also be used to provide input to other public risk analyses to address toxic hazards and far-field overpressure blast effects, if any. This change does

not an expand the scope of the final rule beyond what was proposed in the NPRM because the NPRM identified the need for population exposure input to address toxic hazards for flight and far-field overpressure blast effects.[121] The rationale for the final rule requirements remains the same as proposed in the NPRM: An exposure model provides critical input data on the geographical location of people and critical assets at various times when the launch or reentry operation could occur. While the rationale remains the same, the FAA makes two changes in § 450.123. Consistent with the change discussed in the critical assets section of the preamble, the FAA removes the requirement for an operator to characterize the distribution and vulnerability of critical assets. The FAA also revises the population exposure analysis to require that input data must account for the vulnerability of people to hazardous debris effects. The FAA will issue a Population Exposure Assessment AC to describe a possible means of compliance.

Section 450.123(a) requires that an FSA must account for the distribution of people for the entire region where there is a significant probability of impact of hazardous debris. This final rule is consistent with the requirement in proposed § 450.135(c)(1) that the population exposure data would be required to include the entire region where there is a significant probability of impact of hazardous debris. The definition of ''hazardous debris'' in § 401.7 informs the scope of this requirement. In § 450.123(a), the standard of ''significant'' means that the scope of the population exposure analysis is bounded by what is necessary to demonstrate compliance with the risk criteria in § 450.101(a) and (b), consistent with the scope requirements set in §§ 450.113 and 450.115.

Section 450.123(b) sets constraints on the population exposure analysis consistent with proposed § 450.135(c)(2) through (c)(7). Specifically, § 450.123(b) requires that the exposure analysis must characterize the distribution of people both geographically and temporally; account for the distribution of people among structures and vehicle types; and use reliable, accurate, and timely source data.

Section 450.123(b)(1) relocates the requirements in proposed § 450.135(c)(2), but removes the term ''vulnerability'' and the reference to critical assets, as discussed earlier.[122] The final rule removes proposed § 450.135(c)(4), which would have required the exposure model to have sufficient temporal and spatial resolution that a uniform distribution of people within each defined region can be treated as a single average set of characteristics without degrading the accuracy of any debris analysis output. By removing this requirement, an operator may demonstrate compliance with § 450.123(b) in the manner set forth in proposed § 450.135(c)(4), but also has flexibility to demonstrate compliance through other means.

Section 450.123(b)(2) replaces the more prescriptive requirements in proposed § 450.135(c)(3) by removing the requirement that, in accounting for the distribution of people among structures and vehicle types, an exposure analysis includes ''a resolution consistent with the characteristic size of the impact probability distributions for relevant fragment groups.'' The language removed from the final rule remains a valid means for an operator to demonstrate compliance with § 450.123(b)(2) in the final rule.

Section 450.123(b)(3) replaces the more prescriptive requirements in proposed § 450.135(c)(5) and (c)(6) so that an exposure analysis must use reliable, accurate, and timely source data.

Section 450.123(b)(4) consolidates and replaces the requirements to account for the vulnerability of people to hazardous debris effects that were proposed in § 450.135(d)(3)(i) and (ii), as well as proposed in § 450.137(b)(4). In the final rule, the FAA removes the requirement in proposed § 450.135(c)(7) altogether. Proposed § 450.135(c)(7) is redundant in conjunction with the requirements in § 450.115(b), which specify the necessary fidelity of any FSA, and the requirement in § 450.101(g) that an operator must use accurate data and scientific principles and the analysis must be statistically valid.

The FAA moves and revises the application requirements in proposed § 450.135(e)(3) as § 450.123(c)(1) in the final rule. The FAA revises the final § 450.123(c)(1), which requires an applicant to submit a description of the FSA methodology, to reference § 450.115(c). As previously noted, the population exposure analysis must also be used to provide input to other public risk analyses to address toxic hazards and far-field overpressure blast effects, if any. Section 450.123(c)(2) requires an applicant to submit complete population exposure data, in tabular form, which is a more concise statement equivalent to proposed § 450.135(e)(4). In the final rule, the FAA specifies that the complete population exposure data must be in tabular form and deletes the requirement that the description of the exposure input data include, for each population center, a geographic definition and the distribution of population among shelter types as a function of time of day, week, month, or year. The population exposure data provided under § 450.123(c)(2) may reflect some or all of the information described in proposed § 450.135(e)(4).

s. Probability of Failure Analysis (§ 450.131)

In the NPRM, proposed § 450.131 covered probability of failure analysis requirements for all launch and reentry vehicles. In the final rule, the FAA adopts proposed § 450.131 with minor revisions codifying current practices and eliminating the proposed classes of mishaps referenced in § 450.131.

Section 450.131(a) proposed that for each hazard and phase of flight, an FSA for a launch or reentry would be required to account for vehicle failure probability. The probability of failure would be required to be consistent for all hazards and phases of flight. For a vehicle stage with fewer than two flights, the failure probability estimate would be required to account for the outcome of all previous flights of vehicles developed and launched or reentered in similar circumstances. For a vehicle or vehicle stage with two or more flights, vehicle failure probability estimates would be required to account for the outcomes of all previous flights of the vehicle or vehicle stage in a statistically valid manner. The outcomes of all previous flights of the vehicle or vehicle stage would be required to account for data on any partial failure and anomalies, including Class 3 and Class 4 mishaps, as defined in proposed § 401.5. The FAA adopts § 450.131(a) as proposed with a minor change to the language pertaining to mishaps to reflect revisions to the definition of ''mishap'' in § 401.7. The FAA notes that the final rule replaced the term ''partial failures'' with ''mishap'' in § 450.131(a)(2)

[121] Specifically, in § 450.139(f) the FAA proposed to require an applicant submit (ii) the population density in receptor locations that are identified by toxic dispersion modeling as toxic hazard areas; and (iv) the identity of the population database used. Also, in § 450.137(c)(1) the FAA proposed to require an applicant submit a description of the population centers, terrain, building types, and window characteristics used as input to the far-field overpressure analysis.

[122] However, the proposed requirement in § 450.135(c)(4) to characterize the vulnerability of people both geographically and temporally is effectively preserved in the final rule requirement in § 450.123(b)(4) to account for vulnerability of people to hazardous debris effects in the population exposure analysis.

because the proposed language referenced both anomalies and mishaps, and ''partial failure'' is redundant since any partial failure could qualify as an anomaly or a mishap under § 401.7, depending on the nature of the failure.

Virgin Galactic commented that the proposed requirements to gather and account for anomaly data in the probability of failure analysis introduced additional workload compared to the current regulation. It recommended the FAA adopt a performance-based standard in an SNPRM.

The FAA does not agree that this requirement results in additional workload from current regulations. The FAA notes that the final rule requirement in § 450.101(g) is relevant here because it requires that a method must produce results consistent with, or more conservative than, the results available from previous mishaps, tests, or other valid benchmarks, such as higher-fidelity methods.[123] Hence, an operator has the option to use a more conservative approach to avoid any unnecessary additional workload. For example, an operator can assume one more failure than the actual outcomes of all previous flights of the vehicle or vehicle stage. Therefore, the FAA does not find that the requirements in the final rule constitute additional workload compared to current regulations.

Boeing requested clarification on what is meant by a ''consistent'' probability of failure in this section. The FAA clarifies that the vehicle or vehicle stage probability of failure must be consistent internally with outcomes of previous flights, as described in § 450.131(a)(1) and (a)(2). Furthermore, the probability of failure input data must be consistent for all phases of flight and hazards. In this context, ''consistent'' does not mean identical and does not preclude an operator from varying the probability of failure within statistical confidence limits for the same event in different contexts, in order to bias an analysis towards a conservative outcome.[124] The probability of failure input data should be reasonably conservative and consistent across phases of flight and for various hazards given the uncertainty in each probability of failure.

A hypothetical example is a proposed launch of a two-stage launch vehicle from both CCAFS and Vandenberg Air Force Base (VAFB). In this case, the best-available data indicates the mean conditional probability of a failure during first stage and second stages of flight are both 50 percent, with plus or minus 10 percent uncertainty at a minimal level of confidence (*e.g.,* 60 percent lower and upper bound confidence limits at 40 percent and 60 percent based on the binomial distribution).

Given the fact that the public exposure to hazardous debris effects for launches from VAFB is relatively high during stage one, and the opposite is true for launches from CCAFS, a consistent and reasonably conservative probability of failure analysis would use a 60–40 split in the conditional probability of failure during stage one and stage two flight for launches from VAFB, but a 40–60 split in the conditional probability of failure during stage one and stage two flight for launches from CCAFS. Furthermore, the conditional probability of a failure applied to different hazards, such as debris and toxics, must be consistent with each other. More details on means of compliance are provided in the High Fidelity FSA Methods AC published with this rule, and a future AC on probability of failure.

Leo Aerospace asked if the FAA would consider a balloon platform to be a stage.

The FAA will discuss project-specific information, including whether a balloon platform is part of a launch vehicle stage, during pre-application consultation.

Boeing, Blue Origin, and Sierra Nevada commented on the lack of availability of previous flight information for vehicles not operated or owned by the applicant.

The FAA responded to this comment in the FAA's ''Responses to the Public's Clarifying Questions Received by July 12, 2019,'' [125] which is posted in the docket. An operator should use the best-available data, which in many cases would be limited to publicly available data. The FAA will also provide data and guidance on failure mode and phase of flight allocations in the High Fidelity FSA Methods AC, which will be finalized with this rule.

In the final rule, the FAA replaces all references to Class 3 and Class 4 mishaps in § 450.131 with the term ''mishap.'' As previously noted, the FAA eliminates the proposed classes of mishaps in the revised definition of mishap in § 401.7 of the final rule.

In the NPRM, the FAA proposed that, for FSA purposes, a failure occurs when a vehicle does not complete any phase of normal flight or when any anomalous condition exhibits the potential for a stage or its debris to impact the Earth or reenter the atmosphere outside the normal trajectory envelope during the mission or any future mission of similar vehicle capability. It further stated that Class 1 or Class 2 mishaps would constitute failures.

Blue Origin commented that defining failure as not completing any phase of normal flight is ''overly punitive'' as proposed in § 450.131(b). Operators may define secondary mission objectives for research and development purposes that, if not achieved, do impact mission success but do not impact safety. Blue Origin proposed deleting the language ''when a vehicle does not complete any phase of normal flight or'' and anchor the definition in impacts outside the normal envelope. Virgin Galactic recommended that the FAA should only account for failures, partial failures, and anomalies that affect public safety. Blue Origin also commented that including anomalies that might impact a future mission conflicts with the causal logic that an anomaly experienced on a given mission will be subject to corrective actions prior to the next mission.

The FAA understands the concerns raised by the commenters but finds it unnecessary to change the regulatory text to address these concerns. An operator may adjust its final failure probability estimates to account for various extenuating circumstances, as will be described in a future Probability of Failure Analysis AC. For example, the probability of failure may be adjusted based on extenuating circumstances with justification (*e.g.,* if the failure is not public safety related or if corrective actions implemented after a failure were demonstrated to be successful). If an operator makes any adjustments to the final failure probability estimates to account for various extenuating circumstances, it can update its FSA in accordance with § 450.103(d).

The FAA notes that, for FSA purposes, the vehicle failure probability accounts for any failure of the launch or reentry system because of the way failure is defined in § 450.131(b). Specifically, for FSA purposes, a failure occurs when a vehicle does not complete any phase of normal flight or when any anomalous condition exhibits the potential for a stage or its debris to impact the Earth or reenter the atmosphere outside the normal trajectory envelope during the mission or any future mission of similar vehicle

[123] Because the FSA is necessary to demonstrate compliance with the risk criteria in § 450.101, the requirements set forth in that section regarding the validity of analysis apply to all parts of the FSA.

[124] Section 450.115(b)(1) requires an operator to demonstrate that any risk to the public satisfies the safety criteria of § 450.101 accounting for all known sources of uncertainty.

[125] *See* FAA–2019–02290–0134.

capability. Therefore, in the context of FSA, any failure of the launch or reentry system, including pilot error, that produced vehicle failure as defined in § 450.131(b) must be taken into account.[126]

Proposed § 450.131(c) defined ''previous flight'' by stating that the flight of a launch vehicle begins at a time when a launch vehicle normally or inadvertently lifts off from a launch platform and the flight of a reentry vehicle or deorbiting upper stage begins at a time when a vehicle attempts to initiate a deorbit. The FAA adopts § 450.131(c)(1) as proposed with a minor change. The FAA strikes the words ''normally or inadvertently'' as redundant, since any lift off, whether normal or inadvertent, would count as a flight under the proposed and final rule requirements in § 450.131(c)(1).

Boeing, Lockheed Martin, Northrop Grumman, ULA, and Virgin Galactic requested explanation on whether the proposed requirement in § 450.131(c) would apply to hybrid vehicles.

In the final rule, the FAA revises the regulatory text in response to these comments. The FAA changes ''launch platform'' to ''surface of the Earth'' as the point at which flight begins for a probability of failure analysis. This change reflects the fact that various types of vehicles, such as hybrids, do not lift off from launch platforms. The probability of failure analysis must account for the probability of failure during all phases of flight to ensure public safety, including captive carry, unless the exception in § 450.113(b) applies to that phase of flight. For example, an aircraft crash with a rocket attached can present much higher risks to the public from an explosion, toxic release, or inert impact, than the risks posed by an aircraft crash without a rocket attached.

For the purposes of § 450.131(c)(1) and (c)(2), a previous flight may include flights conducted outside FAA licensed activity, such as amateur, permitted, U.S. government, or foreign launches, reentries, or flights. For the purposes of § 450.131(c)(1) and (c)(2), a previous flight may include FAA-licensed activity, such as the Falcon 9 launch vehicle anomaly which destroyed the vehicle and its AMOS–6 payload,[127] if the outcome exhibited the potential for a stage or its debris to impact the Earth or reenter the atmosphere outside the normal trajectory envelope during the mission or any future mission of similar vehicle capability. The FAA also changes the word ''deorbit'' to ''reentry'' to accommodate a reentry that starts on a suborbital trajectory.

In the NPRM, § 450.131(d) proposed to require that a vehicle probability of failure be distributed across flight times and vehicle response modes. The distribution would be consistent with the data available from all previous flights of vehicles developed and launched or reentered in similar circumstances and data from previous flights of vehicles, stages, or components developed and launched or reentered by the subject vehicle developer or operator. As proposed, the data could include previous experience involving, among other things, a similar level of experience of the vehicle operation and development team members.

The FAA adopts § 450.131(d) with revisions. Specifically, the FAA changes ''flight time'' to ''flight phase.'' ''Flight phase'' gives applicants more flexibility in their analysis because it is less specific than ''flight time.'' The FAA also changes ''vehicle response mode'' to ''failure mode,'' consistent with similar changes throughout the final rule. Finally, the FAA replaces the phrase ''launched or reentered'' in § 450.131(d)(2) to ''launched, reentered, flown, or tested.'' This change will enable the probability of failure allocation across flight phases and failure modes to account for data from previous flights of vehicles, stages, or components by the subject vehicle developer or operator that did not qualify as launch or reentry operations, such as drop tests or glide flights. The FAA also revises ''flight phases'' and ''failure modes'' to be plural in the final rule. This amended language is a minor grammatical change and is consistent with the intent of the proposed requirement.

Virgin Galactic commented that the FAA should not employ a subjective measure of ''level of experience'' and requested this language be stricken.

The FAA asserts that this measure is not subjective. The High Fidelity FSA Methods draft AC contained specific quantitative thresholds that have been used for many years as guidelines to distinguish new versus experienced developers for the purposes of probability of failure analyses. Because the quantitative thresholds are in guidance, the FAA may consider other quantitative thresholds as appropriate. Furthermore, the data available from previous flights of ELVs developed by experienced and inexperienced operators demonstrates a statistically significant difference between the relative frequency of failures during the first and second phases of flight. Therefore, because the required input data may involve a similar level of experience of the vehicle operation and development team members, the final rule in § 450.131(d)(2)(iii) retains that consideration.

The FAA adopts the observed and conditional failure rate requirements in § 450.131(e) as proposed and the application requirements in § 450.131(f) with revisions. Section 450.131(f)(1) to require methods used in probability of failure analysis be in accordance with § 450.115(c) because that section sets out the requirements for FSA methodologies. In § 450.131(f)(2), the FAA changes the term ''vehicle response mode'' to ''failure mode,'' which is consistent with similar changes throughout this final rule.

t. Flight Hazard Area Analysis (§ 450.133)

In § 450.133, the NPRM proposed general requirements for the flight hazard area analysis as well as requirements specific to waterborne vessel hazard areas, land hazard areas, airspace hazard volumes, and the license application. In the final rule, the FAA adopts § 450.133 with revisions. The revisions include changing terms proposed in the NPRM and removing redundant requirements.

Proposed § 450.133(a) stated that an FSA would be required to include a flight hazard area analysis that identifies any region of land, sea, or air that would be required to be surveyed, publicized, controlled, or evacuated in order to control the risk to the public. A flight hazard area analysis would be required to account for all reasonably foreseeable vehicle response modes during nominal and non-nominal flight that could result in a casualty. The NPRM specified six items that would be required to be included in a flight hazard area analysis, at a minimum.

The FAA adopts § 450.133(a) with revisions. The FAA moves the requirement in § 450.133(a) that a flight hazard area analysis must account for all reasonably foreseeable vehicle response modes during nominal and non-nominal flight that could result in a casualty to § 450.133(a)(1). This text is also revised, as discussed below. The replacement of ''vehicle response modes'' with ''failure modes'' was discussed in the preamble section on § 450.101(c)(2).

In § 450.133(a)(1), the FAA proposed that the flight hazard analysis must account for the regions of land, sea, and air potentially exposed to debris impact resulting from normal flight events and from debris hazards resulting from any

[126] The SpaceShipTwo accident on October 31, 2014, is an example of this situation.

[127] On September 1, 2016.

potential malfunction. The FAA revises proposed § 450.133(a)(1) by adding the term ''hazardous debris'' as discussed in the preamble section for § 450.121 (Debris Analysis). As defined, hazardous debris includes any object or substance capable of causing a casualty or loss of functionality to a critical asset, such as an intact vehicle, vehicle fragments, any detached vehicle component, whether intact or in fragments, payload, and any planned jettison bodies. The FAA also replaces ''vehicle response mode'' with ''failure modes'' for consistency throughout the final rule.

In § 401.7, the FAA modifies the definition of ''flight hazard area'' as applied to part 450. The NPRM proposed that flight hazard area means any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated in order to ''protect public health and safety and the safety of property.'' This language was inconsistent with the language in § 450.133. As such, in the final rule, the definition has been revised in § 401.7 for consistency to state that a flight hazard area is any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated in order to ''ensure compliance with the safety criteria in § 450.101.''

Boeing, Lockheed Martin, Northrop Grumman, and ULA suggested replacing ''all reasonably foreseeable'' with ''credible'' because credibility is established in the system safety analysis. As discussed previously, the FAA does not agree with the recommendation because the term credible is prone to errors in judgment whereas the term foreseeable is more readily discerned by analysis (*e.g.,* fault trees). The final rule moves the term ''reasonably foreseeable'' from proposed § 450.133(a) to § 450.133(a)(1), where it more appropriately modifies the language in § 450.133(a)(1) that specifies the analysis must account for the regions of land, sea, and air potentially exposed to hazardous debris generated during normal flight events and all reasonably foreseeable failure modes.

The FAA adopts § 450.133(a)(2) with a minor correction. The FAA replaces ''control risk to any hazard'' in the NPRM with ''control risk from any hazard'' in the final rule.

In § 450.133(a)(3), the FAA proposed that the analysis account for the limits of a launch or reentry vehicle's normal flight, including winds that were no less severe than the worst wind conditions under which flight might be attempted and uncertainty in the wind conditions. The FAA adopts § 450.133(a)(3) with revisions. The FAA changes ''wind conditions'' to ''atmospheric conditions'' because in some cases, such as far-field overpressure blast and toxics analyses, the temperature profile is an atmospheric condition that may also be stipulated as part of the flight commit criteria (in addition to the wind profile). This change does not create any additional burden to the operator because the proposed and final requirements in § 450.135(e)(1) and § 450.165(b)(2) already require an operator to account for and identify the conditions immediately prior to enabling the flight of a launch vehicle or the reentry of a reentry vehicle that are necessary to demonstrate compliance with the safety criteria in § 450.101, such as the atmospheric conditions and any meteorological conditions. The final rule in § 450.133(a)(3) clarifies that all atmospheric conditions are considerations when the operator establishes the worst conditions under which flight might be attempted.

In § 450.133(a)(4), the FAA proposed that the analysis account for the debris identified for each foreseeable cause of breakup, and any planned jettison of debris, launch or reentry vehicle components, or payload. The FAA adopts § 450.133(a)(4) with a revision. For reasons previously discussed, the FAA replaces this section with ''all hazardous debris,'' which uses the term defined in § 401.7 of the final rule. This revision does not change the intent of the requirement.

In § 450.133(a)(5), the FAA proposed that the analysis account for all foreseeable sources of debris dispersion during freefall, including wind effects, guidance and control, velocity imparted by breakup or jettison, lift, and drag forces. The FAA adopts § 450.133(a)(5) with revisions. In the final rule, the analysis must account for sources of debris dispersion in accordance with § 450.121(c). The FAA makes this revision to avoid replication of requirements between §§ 450.133(a)(5) and 450.121(c) and to ensure consistency in the FSA.

AOPA commented that the FAA should provide the public an authoritative source of flight hazard area information as well as guidance on various flight hazard area analysis methodology. The FAA is working on the NOTAM/Aeronautical Information Service (AIS) Modernization effort, which will redesign the current NOTAM management information system with a single technology gateway for entering, processing, and retrieving all NOTAM data, making it easier for all users of the airspace to access safety-critical information. The FAA finds that the issue raised by AOPA is best addressed by the NOTAM/AIS Modernization effort rather than this rulemaking. Industry can provide input on this effort through the Aeronautical Information Systems Coalition. Information regarding temporary flight restrictions (TFR) can be found at: *https://tfr.faa.gov/tfr2/list.html* and is searchable by the type of TFR being implemented. The FAA plans to complete the NOTAM/AIS Modernization effort by late 2022. In addition, an acceptable flight hazard area analysis methodology is addressed in the High Fidelity FSA AC.

Boeing, Lockheed Martin, Northrop Grumman, and ULA also provided suggested regulatory text that stated the airspace hazard volume was only necessary for airspace up to 60,000 feet mean sea level. The FAA agrees that the analysis only needs to account for reasonably expected air traffic in a given region, but, in order to account for operations in different regions, does not change the text to a specific altitude.

The FAA adopts § 450.133(b), (c), and (d) as proposed. Section § 450.133(b)(1), (c)(1), and (d)(1) state that flight hazard areas must be determined as necessary to contain, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty to any person located on land, sea, or air. In the NPRM, the FAA explained that proposed § 450.133(b)(1), (c)(1), and (d)(1) would align FAA regulations with practices at the Federal launch or reentry sites by allowing operators to reduce or otherwise optimize the size of the regions for warnings of potential hazardous debris resulting from normal flight events.

Virgin Galactic stated that, given the currently available information and tools regarding debris, the 97 percent probability of containment requirement in proposed § 450.133(b)(1), (c)(1), and (d)(1) would result in inflated hazard area determinations. Boeing, Lockheed Martin, Northrop Grumman, and ULA commented on proposed § 450.133(b)(1) and suggested it reference current 3-sigma standards. Boeing stated that, given the new limitation on debris, changing from 99.7 percent to 97 percent containment appeared less safe.

The final rule retains the 97 percent containment requirement proposed in the NPRM. The FAA notes that the comments demonstrate a difference of opinion in the industry regarding the appropriate probability of containment requirement for flight hazard areas, with Virgin Galactic claiming the proposal would result in inflated hazard area determinations, as opposed to the other commenters calling for more stringent

hazard area requirements to maintain public safety. The FAA finds the 97 percent containment requirement strikes an appropriate balance, particularly when coupled with the requirement to include the collective risk contribution from people in waterborne vessels in the public risk criteria in § 450.101. As noted in the NPRM, the FAA adopts flight hazard area regulations for waterborne vessels consistent with past waivers that the FAA granted to ensure they align with current practices at the Federal launch ranges, where most commercial launches take place currently. Recent experience from commercial and U.S. Government launch and reentry operations demonstrates that the requirements adopted eliminate unnecessary launch delays while ensuring that the overall level of safety provided to the public remains consistent with the public risk criteria in § 450.101. The FAA notes that the application of a risk management approach to ensure the safety of people in waterborne vessels is consistent with recommendations made by the National Academy of Sciences.[128] The FAA finds that public safety is not compromised by changing 99.7 percent containment to 97 percent containment because the overall public risk criteria must also be met, irrespective of the size of the hazard areas. From a policy perspective, the final rule approach to protect people in waterborne vessels achieves the goal of common standards for launches from any U.S. launch site, Federal or non-Federal. Both industry and the National Space Council have urged government agencies involved in the launch and reentry of vehicles by commercial operators to work towards common standards.

Boeing also requested clarification on how containment boxes for nominal impacts can use the same standard as hazard areas intended to contain debris in the much less likely event of a failure. The FAA notes that planned hazardous debris impacts must use a probability of 1 in the analysis in accordance with § 450.133(a)(6), while hazardous debris impacts due to a failure will have a probability applied as determined from the § 450.131 probability of failure analysis.

The FAA adopts § 450.133(b)(2), (c)(2), and (d)(2) as proposed. These sections use probability of impact contours or probability of casualty contours to meet the risk requirements in § 450.101 for sea, land, and air.

Blue Origin commented that the intent of these requirements seems to be to establish hazard areas for normal operations and mishaps, but the requirements do not explicitly state that the risk criteria applies to malfunction trajectories. Blue Origin proposed that the FAA should specify that risk contours should be conducted for malfunction trajectories.

The FAA notes the proposed requirement in § 450.133(a) that a flight hazard area analysis must account for all reasonably foreseeable vehicle response modes during nominal and non-nominal flight that could result in a casualty also specified that the risk contours required in proposed § 450.133(e)(2)(iii) through (v) must account for malfunction trajectories. However, the FAA revises the requirement to state in § 450.133(a)(1) that the flight hazard area analysis must account for the regions of land, sea, and air potentially exposed to hazardous debris generated during normal flight events and ''all reasonably foreseeable failure modes,'' which includes malfunction trajectories. In addition, the FAA revises the risk contour requirement in § 450.133(e)(2)(iii), which is explained below in the discussion on that requirement. The FAA notes that the High-Fidelity FSA Methods AC describes one acceptable methodology for flight hazard areas, which accounts for malfunction trajectories.

Virgin Galactic commented that requirements for waterborne vessels should also be in § 450.101. The FAA notes that the operator must meet individual and collective risk requirements, as stated in § 450.101. People on waterborne vessels are included in the collective and individual risk calculations. However, as explained in the NPRM, operators have the option to use the current approach in part 417 as a means of compliance, which requires surveillance to ensure no ship is exposed to more than 1×10^{-5} probability of impact, because that will be generally sufficient to ensure compliance with § 450.101.

In § 450.133(e)(1), the FAA proposed that the applicant submit a description of the methodology to be used in the flight hazard area analysis including all assumptions and justifications for the assumptions, vulnerability models, analysis methods, and input data. In the final rule, the FAA revises this requirement by adding that the analysis must be done in accordance with § 450.115(c) to avoid replication of requirements and ensure consistency throughout subpart C of part 450.

In § 450.133(e)(1)(i), the FAA proposed that an applicant provide input wind data and justification in the application. The FAA did not adopt this proposal in the final rule. Rather, the FAA deletes proposed § 450.133(e)(1)(i) because this application requirement is covered in § 450.117(c). Section 450.117(c) accounts for all atmospheric conditions that have an effect on the trajectory, including worst case atmospheric profile conditions under which flight might be attempted.

In § 450.133(e)(2), the FAA proposed that an applicant submit tabular data and graphs of the results of the flight hazard area analysis, including in § 450.133(e)(2)(iv) and (v) the following: if applicable, representative 1×10^{-5} and 1×10^{-6} probability of impact contours for all debris capable of causing a casualty to persons on a waterborne vessel regardless of location; and representative 1×10^{-6} and 1×10^{-7} probability of impact contours for all debris capable of causing a casualty to persons on an aircraft regardless of location.[129]

Blue Origin commented that, by requiring 1×10^{-6} and 1×10^{-7} risk contours for waterborne vessels and aircraft, respectively, the FAA was extending application requirements beyond those either currently codified in part 400 or proposed in part 450.

The FAA notes that, as stated in the NPRM preamble, these contours are necessary for the applicant to demonstrate to the FAA sufficient computational resolution and analysis fidelity for the results that are critical to public safety. Thus, the FAA declines to adopt the recommended change. For these reasons, the FAA adopts § 450.133(e)(2)(iv) and (e)(2)(v) as proposed.

In § 450.133(e)(2)(iii), the FAA proposed that an applicant would be required to submit representative individual probability of casualty contours regardless of location.

Virgin Galactic requested clarification on the meaning of the term ''regardless of location.'' Based on the context in proposed § 450.133(a), which required the flight hazard area analysis to identify any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated in order to control the risk to the public, the term ''regardless of location'' referred to whether the contours are on land, sea,

[128] In 2001, the NRC published a report on ''Streamlining Space Launch Range Safety,'' which included a recommendation that ''safety procedures based on risk avoidance should be replaced with procedures consistent with the risk management philosophy specified by EWR 127–1.'' *See* p. 44 of IBSN 0–309–51648–X available at *http://www.nap.edu/catalog/9790.html.*

[129] The FAA received no comments on § 450.133(e)(2)(i) and (ii) and adopts § 450.133(e)(2)(i) as proposed and § 450.133(e)(2)(ii) a revision include a cross-reference to the hazard area publication requirement in § 450.161.

or air. In the final rule, the FAA changes the term ''regardless of location'' to ''for all locations specified in paragraph (a)'' for more specificity. The FAA further specifies that ''representative probability of casualty contours'' must account for both neighboring operations personnel (at the 1×10^{-5} probability of casualty level) and other members of the public (at the 1×10^{-6} probability of casualty level). Hence, the requirement in § 450.133(e)(2)(iii) of the final rule specifies that representative individual probability of casualty contours include tabular data and graphs showing the hypothetical location of any member of the public that could be exposed to a probability of casualty of 1×10^{-5} or greater for neighboring operations personnel, and 1×10^{-6} or greater for other members of the public, given all foreseeable conditions within the flight commit criteria.

The FAA adds this explicit language to the application requirement to reflect what is necessary to demonstrate compliance with the substantive requirements for flight hazard area analysis as proposed in the NPRM and as set forth in the final rule. Specifically, the substantive requirements proposed in § 450.133(b)(2) and (c)(2), which required an operator to determine the areas of water and land where the individual probability of casualty for any person on a vessel or on land would exceed the criterion in § 450.101(a)(2) or (b)(2), would necessarily have required a demonstration consistent with the revised application requirements.

u. Debris Risk Analysis (§ 450.135)

In the NPRM, the FAA proposed to require that a debris risk analysis be performed to determine whether the individual and collective risk of public casualties meet the safety criteria in § 450.101. The debris risk analysis would be required to compute statistically-valid debris impact probability distributions using the input data produced by FSAs required in proposed §§ 450.117 through 450.133. In the final rule, the FAA adopts § 450.135 with revisions.

Proposed § 450.135(a) stated that a debris risk analysis would be required to demonstrate compliance with safety criteria in proposed § 450.101, either prior to the day of the operation, by accounting for all foreseeable conditions within the flight commit criteria or during the countdown using the best available input data. The FAA adopts § 450.135(a) with revisions. Specifically, the FAA adds in § 450.135(a)(2) that the ''best available input data'' used during the countdown must include any applicable ''flight commit criteria and flight abort rules'' if such controls are necessary to ensure compliance with the public risks as required in proposed and final § 450.165(b).

There is no additional burden on the operator due to the updated language in § 450.135(a)(2), because this requirement is consistent with the proposed requirements in §§ 450.135(e)(1) and 450.165(b)(2). An operator is required to account for and identify the conditions immediately prior to enabling the flight of a launch vehicle or the reentry of a reentry vehicle that are necessary to demonstrate compliance with the safety criteria in § 450.101, such as the atmospheric conditions and any other commit criteria. The final rule in § 450.135(a)(2) now explicitly acknowledges that a valid debris risk analysis must account for any applicable flight commit criteria and flight abort rules when the operator establishes if the present conditions produce public risks consistent with the safety criteria in § 450.101.

In § 450.135(b), the FAA proposed performance-based requirements to address the physical phenomena that influence the propagation of debris, which the analysis would be required to account for to compute the probability of impact of debris on people and critical assets. In the final rule, the FAA adopts and moves these requirements with revisions to § 450.121(c), as discussed in the section of this preamble on Debris Analysis. There were two reasons for moving the proposed propagation of debris requirements in § 450.135(b) to § 450.121(c). First, the computation of valid impact probability distributions is relevant to more than the debris risk analyses; for example, valid impact probability distributions are necessary for the development of flight hazard areas and the yield-probability pairs used as input to the far-field overpressure analysis. Second, although the relationships between the FSA sections are complex and interdependencies exist, the FAA sought to lay out the FSA requirements in a sequential order.

In § 450.135(c), the FAA proposed the features of a valid population exposure analysis. In the final rule, the FAA adopts and moves these requirements with revisions to § 450.123, as discussed in the preamble associated with that section. As noted, the FAA moved the population exposure analysis requirements out of the proposed debris risk analysis section because a population exposure analysis must also be used to provide input to other public risk analyses to address toxic hazards and far-field overpressure blast effects, if any. As discussed earlier, this is not an expansion of the scope because the NPRM identified the need for population exposure input to address toxic hazards for flight and far-field overpressure blast effects.

In proposed § 450.135(d), the FAA set forth the features of a valid casualty area and consequence analysis. Proposed § 450.135(d) stated that a debris risk analysis would be required to model the casualty area and compute the predicted consequences of each reasonably foreseeable vehicle response mode in any one-second period of flight in terms of CE_C. The NPRM also specified that the contents of a casualty area and consequence analysis must account for, at a minimum, the items proposed in § 450.135(d)(1) through (d)(3).[130]

In the final rule, the FAA revises and re-designates the requirements proposed in § 450.135(d) to § 450.135(b). In addition, the FAA replaces the term ''vehicle response mode'' with ''failure mode,'' consistent with similar changes made throughout the final rule and discussed further in § 450.101(c)(2) of this preamble. The FAA also replaces the term ''one-second period of flight'' with ''significant period of flight,'' as discussed in the preamble section associated with high consequence event protection.

In the NPRM, the FAA included a definition of ''casualty area'' in § 401.5, defined as the area surrounding each potential debris or vehicle impact point where serious injuries, or worse, can occur. The FAA adopts this definition as proposed.

SpaceX commented the FAA should modify proposed § 450.135(d) to require that the casualty area and consequence analysis not only account for the items in proposed § 450.135(d)(1) through (d)(3) but also model them conservatively. The FAA notes that the term ''account for'' already includes using conservative data or assumptions for all inputs and results of an analysis, pursuant to § 450.101(g). Thus, this change would be redundant.

As previously discussed, the requirements for debris propagation in § 450.135(b) have been relocated in the final rule to § 450.121(c). As a result, the FAA adds a requirement in § 450.135(b)(2) that a casualty area and consequence analysis must account for

[130] The FAA received no comments on § 450.135(d)(1), which requires the casualty and consequence analysis to account for all relevant debris fragment characteristics and the characteristics of a representative person exposed to any potential hazard. The FAA adopts this requirement without change.

statistically-valid debris impact probability distributions. This requirement is derived from the requirements in proposed § 450.135(b). The FAA notes that without statistically-valid impact probability distributions it would be impossible to compute the predicted consequences of each reasonably foreseeable failure mode in any significant period of flight in terms of conditional expected casualties, as required in proposed § 450.135(d) and § 450.135(b) of the final rule, because the consequence of any failure depends on the characteristics of the debris (such as the casualty area) predicted to impact exposed populations. Thus, the FAA finds the final rule is consistent with the NPRM in requiring this information as part of a debris risk analysis.

In the NPRM, the FAA proposed to require that the casualty area and consequence analysis account for any direct impacts of debris fragments, intact impact, or indirect impact effects, in proposed § 450.135(d)(2). It also proposed that the analysis account for the vulnerability of people and critical assets to debris impacts including all hazard sources, such as the potential for any toxic or explosive energy releases, in proposed § 450.135(d)(3)(ii) and indirect or secondary effects such as bounce, splatter, skip, slide or ricochet, including accounting for terrain, in proposed § 450.135(d)(3)(iii).

In the final rule, the FAA consolidates the three proposed requirements into § 450.135(b)(3). Section 450.135(b)(3) more simply states that the analysis must account for ''any impact or effects of hazardous debris,'' because the new definition of ''hazardous debris'' in § 401.7 reflects the scope of the NPRM requirements. In the final rule, the use of the defined term ''hazardous debris'' in § 450.135(b)(3) replaces the requirement in proposed § 450.135(d)(3)(ii) to account for all hazard sources, such as the potential for any toxic or explosive energy releases. It also replaces the requirement in proposed § 450.135(d)(2) to account for any direct impacts of debris fragments, intact impact, or indirect impact effects. Also, the final rule uses the phrase ''any impact or effects'' of hazardous debris to replace the proposed requirements to account for any direct or indirect effects, including indirect or secondary effects such as bounce, splatter, skip, slide, or ricochet, including accounting for terrain. The FAA's use of the defined term hazardous debris, discussed previously, allows for consistency throughout the final rule with regard to the scope of the FSA requirements. This revision does not change the scope of the proposed requirements because the definition includes the concept of all hazard sources and the direct impacts of debris fragments, intact impact, or indirect impact effects.

In the NPRM, the FAA required in proposed § 450.135(d)(3) that the analysis account for the vulnerability of people and critical assets to debris impacts. In the final rule, the FAA moves proposed § 450.135(d)(3) as § 450.135(b)(4) and strikes the reference to critical assets, as explained in the preamble section on critical assets. The FAA also re-designates and adopts proposed § 450.135(d)(3)(i) as § 450.135(b)(4)(i) in the final rule. As discussed, the proposed requirements in § 450.135(d)(3)(ii) and (d)(3)(iii) are captured in § 450.135(b)(3) in the final rule.

In the NPRM, the FAA proposed in § 450.135(d)(3)(iv) that the analysis must account for the effect of wind on debris impact vector and toxic releases. In the final rule, the FAA re-designates proposed § 450.135(d)(3)(iv) as § 450.135(b)(4)(ii). The FAA also revises the requirement so that the analysis must account for the effect of atmospheric conditions on debris impact and effects known to influence the vulnerability of people to hazardous debris impacts. For example, wind can typically have a pronounced effect on the debris impact vector as illustrated in the FAA FSA Handbook. In addition, other atmospheric conditions, such as the presence of a temperature inversion can have a significant effect on the vulnerability of people to toxic releases.[131]

The change from the proposed § 450.135(d)(3)(iv) implemented in the final rule in § 450.135(b)(4)(ii) does not create any additional burden to the operator because this requirement is consistent with the proposed requirements in §§ 450.135(e)(1) and 450.165(b)(2). An operator is required to account for and identify the conditions immediately prior to enabling the flight of a launch vehicle or the reentry of a reentry vehicle that are necessary to demonstrate compliance with the safety criteria in § 450.101, such as the atmospheric conditions and any meteorological conditions. Furthermore, given the proposed requirement in § 450.135(d)(vi) to account for the uncertainty in fragment impact parameters in assessing the vulnerability of people to debris impacts, an operator already would have contemplated the need to account for the effect of atmospheric conditions on debris impact effects now explicitly required under § 450.135(b)(4)(ii).

In the NPRM, proposed § 450.135(d)(3)(vi) specified that the analysis account for uncertainty in fragment impact parameters. In the final rule, the FAA re-designates proposed § 450.135(d)(3)(vi) as § 450.135(b)(4)(iv). The FAA also requires in the final rule that the analysis account for uncertainty in the input data, such as fragment impact parameters. Although the uncertainty in fragment impact parameters typically has a pronounced effect, it is conceivable that uncertainties in the input data more generally could affect the vulnerability of people to hazardous debris effects. The FAA finds these changes consistent with the proposed and final requirements in § 450.115(b)(1) that an operator's FSA method must have a level of fidelity sufficient to account for all known sources of uncertainty.[132]

In the NPRM, proposed § 450.135(e) listed the application requirements associated with the debris risk analysis, including the casualty area and consequence analysis. Proposed § 450.135(e)(1) required an applicant to submit a description of the methods used to compute the parameters required to demonstrate compliance with the safety criteria in proposed § 450.101, including a description of how the operator would account for the conditions immediately prior to enabling the flight of a launch vehicle or the reentry of a reentry vehicle, such as the final trajectory, atmospheric conditions, and the exposure of people and critical assets.

In the final rule, the FAA re-designates and adopts proposed § 450.135(e)(1) as § 450.135(c)(1) with revisions. The FAA removes the proposed requirement to submit a description of the methods ''used to compute the parameters'' required to demonstrate compliance with the safety criteria in § 450.101. Instead, the FAA replaces this requirement with a requirement to submit a description of the methods used to demonstrate compliance with the safety criteria in § 450.101, in accordance with § 450.115(c). This change is consistent with other FSA sections. Also, the FAA strikes the reference to critical assets as explained in the preamble section associated with critical assets.

[131] The FAA re-designates and adopts proposed § 450.135(d)(3)(v) as § 450.135(b)(4)(iii) without substantive changes in the final rule. The FAA received no specific comments on the proposed requirement.

[132] The FAA re-designates and adopts proposed § 450.135(d)(3)(vii) as § 450.135(b)(4)(v) without substantive change in the final rule. The FAA received no specific comments on the proposed requirement.

In the NPRM, the application requirements in § 450.135(e)(2) addressed the methods used to compute debris impact distributions. In the final rule, the FAA moves proposed § 450.135(e)(2) to § 450.121(d)(3). Proposed § 450.135(e)(3) and (e)(4) addressed population exposure data. In the final rule, those requirements are moved to § 450.123(c). These changes are described in the preamble sections associated with those sections.[133]

The FAA moves the application requirements in proposed § 450.135(e)(8)(i) through (iii) regarding the collective and individual debris risk outputs to § 450.135(c)(5)(i) through (iii) and removes the proposed requirement to report critical asset results in § 450.135(e)(8)(iv), as discussed further in the critical asset section of this preamble.

The FAA revises and re-designates the application requirements in proposed § 450.135(e)(9) on the collective and individual debris risk outputs as § 450.135(c)(6). The FAA replaces the term ''vehicle response mode'' with ''failure mode.'' This revision is consistent with changes throughout the final rule. The FAA also changes the term ''one-second interval'' to ''significant period,'' as explained in the preamble section on CE_C.

SpaceX commented that it was not clear why proposed § 450.135(e)(8) and (9) would require debris risk analysis to include both representative conditions and the worst foreseeable conditions, arguing that if the worst foreseeable conditions meet requirements, then representative conditions are of no consequence. The FAA responds that, for the purposes of § 450.135(c)(5) and (c)(6), worst foreseeable conditions means those conditions that produce the highest individual, collective, and conditional risks under which the operator would initiate the launch or reentry. An operator can submit the same debris risk analysis results for representative conditions and the worst foreseeable conditions in cases where there is no difference between representative conditions and the worst foreseeable conditions that are significant to public safety.

However, the FAA foresees the potential for situations where the differences between the representative conditions and the worst foreseeable conditions would require additional operational mitigations. An example would be running the debris risk analysis using input data for atmospheric conditions that lead to risks just below the limits set in § 450.101 (*i.e.,* worst foreseeable conditions) and running the debris risk analysis using more typical atmospheric conditions that produce risks clearly below the limits. Under the worst foreseeable conditions, the collective risk results for people on land could be such that the operator would need to perform additional surveillance of areas to ensure the absence of waterborne vessels, whereas under representative conditions such surveillance would not be necessary to ensure compliance with collective risk limits in § 450.101(a)(1) and (b)(1). The FAA does not anticipate that there will be significant additional burden in providing the analysis for representative conditions.

v. Far-Field Overpressure Blast Effect Analysis, or Distant Focus Overpressure (DFO) (§ 450.137)

In the NPRM, § 450.137 proposed requirements for far-field overpressure blast effects analysis. Proposed § 450.137(a) required that a far-field overpressure blast effect analysis demonstrate compliance with safety criteria in proposed § 450.101 either prior to the day of the operation, accounting for all foreseeable conditions within the flight commit criteria, or during the countdown using the best available input data. In the final rule, the FAA adopts § 450.137(a) with one revision.

The final rule in § 450.137(a)(2) specifies that far-field overpressure analysis performed during the countdown using the best available input data must also include flight commit criteria and flight abort rules. The FAA notes that the best available input data specified in proposed § 450.137(a)(2) would naturally include flight commit criteria and flight abort rules because those would generally have a significant influence on the public risks posed by hazardous debris effects. Hence, the phrase ''including flight commit criteria and flight abort rules'' is consistent with the requirement for a debris risk analysis in § 450.135(a)(2).

Virgin Galactic commented that § 450.137(a)(1) appeared to require an FSA the day before launch for the portion of its launches involving its carrier aircraft's captive carriage of the spaceship. Virgin Galactic expressed a concern about the operational impact and additional workload of a day of launch analysis. Microcosm requested clarification on whether the regulations required a day of launch analysis if meteorological conditions did not present an environment conducive to far-field overpressure.

Section 450.137(a)(1) does not require a full FSA the day before launch. Instead, § 450.137(a) requires the far-field overpressure blast effect analysis be performed either as a ''screening'' analysis prior to the day of the operation, accounting for all foreseeable conditions within the flight commit criteria, or during the countdown using the best available input data. The requirement in § 450.137(a)(1) does not have a time constraint for when the ''screening analysis'' must be completed. In response to Microcosm's comment, the FAA notes that, in order to determine that local meteorological conditions do not present an environment conducive to far-field overpressure, an operator would necessarily be required to perform an analysis under § 450.137(a)(1). As such, § 450.137(a)(1), as proposed and adopted without change, allows an operator to demonstrate that a far-field overpressure analysis need not be performed during the countdown if the flight commit criteria are sufficient to ensure compliance with § 450.101.

In the NPRM, the FAA proposed requirements associated with analysis constraints in § 450.137(b) that set required performance outcomes and the specific factors that a far-field overpressure blast effect analysis must consider. Blue Origin commented that the proposed requirements in § 450.137(b) were prescriptive. The FAA agrees that the proposal was unnecessarily specific in § 450.137(b)(3) through (5) and revises these requirements.

In the NPRM, § 450.137(b)(3) proposed that the analysis account for the explosive capability of the vehicle at impact and at altitude, and potential explosions resulting from debris impacts, including the potential for mixing of liquid propellants. In the final rule, the FAA revises the language in proposed § 450.137(b)(3) and relocates it to § 450.137(b)(1) to reflect the order in which the FAA expects the analysis will be conducted. As rewritten, § 450.137(b)(1) in the final rule requires the analysis to account for the explosive capability of the vehicle and hazardous debris at impact and at altitude. As discussed previously, the FAA uses the definition for ''hazardous debris'' to reflect the scope of the NPRM requirements. The final rule also removes the phrase ''potential for mixing of liquid propellant'' because it is redundant with ''explosive capability,'' which is already included in the requirement. The FAA has also removed reference to solid propellant

[133] The FAA adopts without change and re-designates proposed § 450.135(e)(5) through (e)(7) as § 450.135(c)(2) through (c)(4) in the final rule. The FAA received no specific comments on these proposals.

impacts because they are part of the explosive capability.

In the NPRM, proposed § 450.137(b)(1) required that the analysis account for the potential for distant focus overpressure or overpressure enhancement given current meteorological conditions and terrain characteristics. In the final rule, the FAA re-designates proposed § 450.137(b)(1) as § 450.137(b)(2). The FAA also requires in § 450.137(b)(2) that the analysis must account for the influence of meteorological conditions and terrain characteristics. The FAA notes meteorological conditions are known to have a potentially substantial influence on the propagation and attenuation of blast waves with peak incident overpressures at or below 1.0 psi. In the final rule, the FAA removes the reference to current meteorological conditions in proposed § 450.137(b)(1) to reflect that an applicant may use a screening analysis pursuant to § 450.137(a)(1) to demonstrate additional analysis is not required by accounting for all foreseeable conditions within the flight commit criteria.

In the NPRM, proposed § 450.137(b)(2) required that the analysis account for the potential for broken windows due to peak incident overpressures below 1.0 psi and related casualties. In the final rule, the FAA re-designates proposed § 450.137(b)(2) as § 450.137(b)(3) and adds the essential elements from proposed § 450.137(b)(4) through (b)(6). Those sections contained unnecessary details regarding shelter types, time of day, characteristics of potentially affected windows including size, location, glazing material, and characteristics of potential glass shards.

Section 450.137(b)(3) removes these details and captures the concept of the requirements proposed in § 450.137(b)(4) through (b)(6) by adding language to reflect that the potential for broken windows due to peak incident overpressures below 1.0 psi and related casualties must ''be based on the characteristics of exposed windows and the population's susceptibility to injury, with considerations including, at a minimum, shelter types, window types, and the time of day of the proposed operation.''

Blue Origin commented that the constraints could be accomplished by an analysis tool available only to the government. The FAA disagrees that the far-field overpressure analyses can only be accomplished using a tool available to the U.S. government. Currently available materials contain a detailed technical description of a valid approach.[134] Furthermore, the FAA confirms that the analysis tool in use by the U.S. government has been used by the U.S. commercial space transportation industry at non-Federal sites as well.

The FAA adopts § 450.137(c) with only two minor modifications. In the NPRM, § 450.137(c)(6) explicitly identified that an applicant would be required to submit the analysis results given foreseeable meteorological conditions, yields, and population exposures.

In the final rule, § 450.137(c)(6) requires that the application include the individual risk data given foreseeable conditions. The FAA also revises § 450.137(c)(7) in this manner. The FAA notes generally that the same elements of the foreseeable conditions listed in the NPRM influence the results of the far-field overpressure blast effects analysis. Thus, the reworded final rule maintains the same scope and intent of the NPRM application requirements. The FAA adds this language because the proposal was unnecessarily limited.

w. Toxic Hazards (§§ 450.139 and 450.187)

In the NPRM, the FAA proposed to consolidate requirements for toxic release analysis into two performance-based regulations: §§ 450.139 (Toxic Hazards for Flight) and 450.187 (Toxic Hazards Mitigation for Ground Operations). Although the two proposed sections contained a number of similarities, the FAA divided them into two sections because ground operations and flight operations had different proposed criteria to establish an acceptable level of public safety.

Proposed §§ 450.139(a) and 450.187(a) made the sections applicable to any launch or reentry vehicle, including all vehicle components and payloads, that use toxic propellants or other toxic chemicals.

Virgin Galactic requested that the FAA create an exception to §§ 450.139 and 450.187 for carrier aircraft on hybrid systems that already possess a standard airworthiness certificate or experimental airworthiness certificate from FAA, as these aircraft most commonly carry jet fuel. Virgin Galactic commented that, although jet fuel may be considered a toxic substance, it is carried by thousands of aircraft every day and thus performing a toxic release hazard analysis for jet fuel would not have a material effect on public safety.

The FAA acknowledges that, historically, no toxic release hazard analysis has been required for kerosene-based fuels, such as jet fuel, and agrees that such an analysis would be unnecessary in most instances. Therefore, in the final rule, the FAA revises the applicability language in §§ 450.139(a) and 450.187(a) to create an exception from the toxic release hazard analysis for kerosene-based fuels unless the Administrator determines that an analysis is necessary to protect the public safety. The FAA anticipates that such an analysis will be required for uses of kerosene-based fuels that are novel or inconsistent with standard industry practices. The FAA will work with operators during pre-application consultation to identify any kerosene-based propellants requiring a toxic release hazard analysis under §§ 450.139 or 450.187.

Proposed § 450.139(b) required an operator to conduct a toxic release hazard analysis and manage the risk of casualties from exposure to toxic release either through containing hazards in accordance with proposed § 450.139(d) or by performing a toxic risk assessment, under proposed § 450.139(e), that protects the public consistent with the safety criteria proposed in § 450.101. Furthermore, proposed § 450.139(b)(3) required an operator to establish flight commit criteria based on the results of its toxic release hazard analysis, containment analysis, or toxic risk assessment for any necessary evacuation of the public from any toxic hazard area. The FAA adopts § 450.139(b) as proposed.

In the NPRM, paragraph (b) was inadvertently omitted from the regulatory text to § 450.187; however, the preamble discussed that proposed § 450.187(b) would, like proposed § 450.139(b), require an operator to manage the risk of casualties from exposure to toxic release by either containing the hazards or performing a toxic risk assessment. The preamble stated that for ground operations, an operator using a toxic risk assessment must demonstrate compliance with proposed § 450.109(a)(3), rather than § 450.185(c).[135] The FAA adds paragraph (b) to § 450.187 in the final rule. As discussed later in this section,

[134] A valid approach is described in ''Safety Design for Space Operations,'' Allahdadi, Firooz A., Isabelle Rongier, Tommaso Sgobba, Paul D. Wilde (Eds.), ''Safety Design for Space Operations,'' Sponsored by The International Association for the Advancement of Space Safety, published by Elsevier, Watham, MA, 2013. The only three topics not addressed in that reference (updated explosive impact yield models, launch availability analyses based on past measurements of meteorological conditions, and satisfaction of license application requirements) are addressed in AC 450.137 ''Distant Focusing Overpressure Risk Analysis Supplemental Topics,'' which is planned to be published after this final rule.

[135] 84 FR 15395.

the FAA revises the toxic risk assessment criteria for ground operations by replacing the reference to proposed § 450.109(b)(3) with a reference to § 450.185(c). The FAA also revises § 450.139(b)(3) to refer to ''toxic containment,'' rather than a ''toxic containment analysis,'' as this term does not appear in the regulation.

Proposed §§ 450.139(c) and 450.187(b) set forth the requirements for toxic release hazard analysis. The FAA adopts the substance of those provisions in the final rule, but re-designates proposed § 450.187(b) as § 450.187(c), to account for the addition of new § 450.187(b).

As noted, §§ 450.139(b) and 450.187(b) in the final rule require an operator to manage the risk of casualties that could arise from the exposure to toxic release through toxic containment or by using a toxic risk assessment. Toxic containment, as proposed in §§ 450.139(d) and 450.187(c), required an operator to manage the risk of casualty from the exposure to toxic release either by evacuating, or being prepared to evacuate, the public from a toxic hazard area, or by employing meteorological constraints. In either scenario—evacuation or employment of meteorological constraints—the operator would be required to demonstrate that an average member of the public would not be exposed to greater than one percent conditional individual probability of casualty in the event of a worst-case release or maximum credible release scenario. The FAA received a formal comment from NASA during the interagency review on proposed § 450.139(d) and § 450.187(c). The FAA revised these provisions in the final rule consistent with the updated definition of toxic hazard area described below. Specifically, § 450.139(d)(1) and § 450.187(c)(1) require an operator using toxic containment to manage the risk of casualty from the exposure to toxic release either by evacuating, or being prepared to evacuate, the public from any toxic hazard area. These revisions are consistent with current practice. The FAA also re-designates proposed § 450.187(c) as § 450.187(d) to account for the addition of new § 450.187(b).

The FAA proposed to define ''toxic hazard area'' in § 401.5 (§ 401.7 in the final rule) as ''a region on the Earth's surface where toxic concentrations and durations may be greater than approved toxic thresholds for acute casualty, in the event of a release during launch or reentry.''

In the final rule, the FAA revises the proposed definition of ''toxic hazard area'' to include the language from proposed §§ 450.139(d) and 450.187(c) regarding the ''a worst-case toxic or maximum credible release scenario.'' Thus, in the final rule, a ''toxic hazard area'' means ''a region on the Earth's surface where toxic concentrations and durations may be greater than accepted toxic thresholds for acute casualty in the event of a worst-case toxic or maximum credible release scenario during launch or reentry.'' The FAA revises this definition to ensure that the toxic hazard area is consistent whether the operator performs a toxic risk assessment or toxic containment. The revised definition of ''toxic hazard area'' is consistent with the approach taken in current regulation in Appendix I to part 417 under I417.5(c), which directly links the toxic concentration thresholds to the size of the toxic hazard area. The FAA anticipates that the toxic concentration thresholds used in an accepted means of compliance for §§ 450.139 and 450.187 will generally be consistent with those in Appendix I to part 417 under I417.5(c).

The final rule's requirements for a toxic risk assessment under § 450.139(e) are unchanged from the proposal. A toxic risk assessment must meet the safety criteria of § 450.101 and account for: Airborne concentration and duration thresholds of toxic propellants or other chemicals; physical phenomena expected to influence any toxic concentration and duration; the toxic hazard area and the meteorological conditions involved; and all members of the public that may be exposed to the toxic release.

In the final rule, § 450.187(e), which contains the requirements for a toxic risk assessment for ground operations, includes one revision from the proposal. As mentioned, proposed § 450.187(d) required an operator using toxic risk assessment to manage the risk from any toxic release hazard and demonstrate compliance with the criteria in § 450.109(a)(3). The FAA replaces the reference to proposed § 450.109(a)(3) with a reference to § 450.185(c) because the flight hazard analysis risk criteria were removed from § 450.109. The standard in § 450.185(c) is the same as in proposed § 450.109(a)(3); therefore, there is no substantive change in the criteria. As a result, an operator complies with the requirements for a toxic risk assessment by demonstrating no more than an extremely remote likelihood of toxic exposure causing death or serious injury to the public, using toxic concentration and duration thresholds accepted by the Administrator as a means of compliance.

In the final rule, the FAA amends the application requirements proposed in §§ 450.139(f) and 450.187(e). Although proposed §§ 450.139(d) and 450.187(c) detailed the two ways in which an operator could perform toxic containment, the NPRM did not specify how an operator would demonstrate compliance with the toxic containment requirements in their application. In the final rule, the FAA adds an application requirement for toxic containment, in §§ 450.139(f)(8)(i) and 450.187(f)(8), which reflects the substantive requirements for performing toxic containment. That is, if toxic containment is selected, the applicant must identify the evacuation plans or meteorological constraints and associated launch commit criteria or ground hazard controls that it will employ to ensure that the public will not be within a toxic area in the event of a worst-case or maximum credible release scenario. The FAA notes that an applicant will need to submit the information required by this subsection in order to demonstrate compliance with the substantive requirements for toxic containment in §§ 450.139(d) and 450.187(c).

The FAA revises the application requirements, in §§ 450.139(f)(8)(ii) and 450.187(f)(9), to reflect the substantive requirements of toxic risk assessment. If a toxic risk assessment is performed, then the applicant must account for the public that may be exposed to airborne concentrations above the toxic concentration and duration thresholds, describe any risk mitigations applied in the toxic risk assessment, describe the population exposure input data used in accordance with § 450.123 (Population Exposure Analysis), and demonstrate compliance with the applicable public risk criteria (for flight, the risk criteria in § 450.101; for ground operations, the risk criteria in § 450.185(c)). Lastly, the FAA replaced the term ''population density'' with ''population characteristics'' in § 450.139(f)(8)(ii)(2) and § 450.187(f)(9)(ii) because characteristics other than density (*e.g.,* vulnerability of population) would be relevant to assessing potential effects of toxic release, as indicated by the Population Exposure Analysis criteria in § 450.123.

Blue Origin commented that toxic risk analysis tools were not currently available to operators, and that, unless the FAA facilitated access to these tools, a sole-source provider of this service may arise. One individual commenter asked what dispersion models were acceptable to the FAA and commented that the FAA should provide specific examples of allowable and acceptable toxic release and dispersion mitigations.

The FAA disagrees that the tools needed to analyze risks associated with a potential release of toxic substances during launch or reentry are not currently available to operators. However, the FAA will issue an AC entitled, ''Toxic Hazards for Flight,'' that will provide guidance and examples of publicly available tools for conducting the required toxic release hazard analyses, as well as a toxic risk assessment and toxic containment. This guidance will include information on:

- Determining the airborne toxic concentration threshold or level of concern (LOC) for each toxic propellant or toxic combustion by-product;
- Determining the worst-case quantity of any toxic release that might occur during the proposed flight of a launch vehicle, or that might occur in the event of a flight mishap;
- Determining the worst-case quantity of any toxic release that might occur during normal launch processing, and that might occur in the event of a mishap during launch processing;
- Characterizing the terrain, as a precursor for modeling the atmospheric transport of a toxic release from its source to downwind receptor locations;
- Determining the meteorological conditions for the atmospheric transport of any toxic release from its source to downwind receptor locations;
- Performing air quality dispersion modeling to predict concentrations at selected downwind receptor locations (by characterizing the atmospheric processes that disperse a toxic substance emitted by a source); and
- Determining the population density in receptor locations that could potentially be identified by air quality dispersion modeling as toxic hazard areas.[136]

x. Computing Systems (§ 450.141)

In the NPRM, the FAA proposed in § 450.111 (Computing Systems and Software) to require operators to develop a process that identifies and assesses hazards to public safety and the safety of property arising from computing systems and software. Operators would have needed to identify all safety-critical functions associated with its computing systems and software and to classify software based on degree of autonomy. In the NPRM, software safety requirements would have increased in rigor with the rise in the degree of autonomy of the software. Conversely, software safety requirements would have decreased in rigor with reductions in the software's degree of autonomy.

In the final rule, the FAA revises proposed § 450.111 and re-designates it as § 450.141 (Computing Systems). Although the scope of the requirements for operators under § 450.141 does not differ substantially from the proposed version, the FAA replaces prescriptive requirements with performance-based standards and provides increased flexibility for operators to demonstrate compliance with § 450.141. The final rule levies requirements for computing system safety items in proportion to their criticality rather than their autonomy; requires independent verification and validation for safety-critical computing system safety items; and retains the NPRM's focus on development and testing processes instead of direct inspection of software by the FAA. The FAA removed the term, ''software,'' from the section heading since ''computing systems'' would include software. The FAA also removes the definition of ''control entity'' proposed in § 401.5 because the term is no longer used in the final rule.

A number of commenters stated the requirements proposed in § 450.111 were overly prescriptive or difficult to meet. SpaceX stated that the proposed software process would be more burdensome and costly for applicants than it had been under current regulations and would prevent applicants from utilizing safer methods to construct a safety case. Blue Origin and SpaceX argued the proposed requirement would hinder technological advances that could improve safety. Blue Origin stated the proposal threatened innovation towards lower cost, higher quality, and safer software approaches, but did not specify the approaches that would be impeded by the NPRM. Rocket Lab similarly asserted that the proposal would hinder the development of software for FSS, the automation of which is currently a major area for innovation. Rocket Lab commented that the proposal did not allow flexibility to use other means of functional system safety from equivalent industries or government standards, and that the requirements would become quickly outdated as software technologies and best practices evolve. CSF also viewed the proposal as highly prescriptive and uneconomical for the FAA or for industry.

CSF and SpaceX specifically rejected the degree of autonomy approach proposed in § 450.111, noting that human involvement did not always produce a safer system. CSF suggested the FAA scale the levels of rigor based on hazard effects and architectural mitigations. Virgin Galactic stated that software need not be categorized by levels of consequence and degrees of control if the software development process was linked to a system safety program.

The FAA agrees that some of the requirements proposed in § 450.111 were too prescriptive, potentially overly burdensome, and could have the effect of discouraging technological innovation to improve safety.[137] The FAA also agrees with the commenters' discussion of the limitations of autonomy as a criterion for level of rigor. In the final rule, the FAA revises the requirements for computing systems, which are now located in § 450.141 to address the commenters' concerns. Section 450.141 scales level of rigor for computing system requirements based on system-level criticality rather than on degree of autonomy, and is designed to parallel the requirements of computing system safety responses to the existing regulations. The existing regulations require plans for software development and validation and verification plans but remain silent on the acceptable content of those plans. The final rule requirements are designed to align with current software safety submissions. The FAA also removes prescriptive requirements from § 450.141, as detailed in the following paragraphs, to increase flexibility in application to current and future computing system designs.

Section 450.141 requires the identification and assessment of the public safety-related computing system requirements, functions, and data items, in order to streamline the evaluation of computing system safety. The final rule retains the requirement proposed in § 450.111 to identify and assess the public safety implications of computing systems, which derives from the current requirements in §§ 417.123(a) and 431.35(c) to perform this assessment as part of a system safety process. The explicit identification of the public safety related aspects of computing systems enables a reduction in the scope of FAA's evaluation compared to the current regulations.

In the final rule, § 450.141(a) requires an operator to identify computing system safety items, meaning any software or data that implements a capability that could present a hazard to

[136] SpaceX made a comment referencing an agreements subsection of § 450.139(b), but no such subsection existed in the NPRM.

[137] As an example, the FAA acknowledges the commenter's concerns in particular with regard to the requirements to document a process for identifying hazards arising from software; to meet software testing standards and hazard analyses based on levels of autonomy; and to detail the functionality of all software having no safety impact.

the public, and the criticality of each computing system safety item, commensurate with its degree of control over hazards to the public and the severity of those hazards. For purposes of this section, a computing system safety item is any item that is a computing system or software that has some degree of control over hazards to the public; a computing system that is either a cause of or a mitigation for a hazard that can affect the public. Computing system safety items include not only software, but also software elements, including data, and interfaces that present or control risks to the public (*e.g.,* software/hardware interfaces, and software/human interfaces). The FAA uses the term ''computing system safety item'' in order to provide a clean interface between software safety, which controls risks due to flaws in logic, and system safety, which controls risk. Software runs on hardware in response to commands and inputs, so a computing system safety item is often more than just software. ''Level of criticality'' here means the combination of a computing system safety item's importance in the causal chain for a given hazard, which is commensurate to its degree of control, and the severity of that hazard. Computing system safety items that are more influential on a causal chain for a hazard of a given severity would be subject to a proportionally higher level of rigor in development and testing. The degree of control may be evident in (1) a system's tolerance to a given computing system fault, (2) the computing system's autonomy in causing or preventing a hazard, (3) the number and characteristics of other system faults or failures required for the hazard to manifest itself, or (4) some other measure devised by the applicant.

The requirement proposed in § 450.111(c) to allocate development process rigor according to degree of autonomy has been replaced with the requirement in § 450.141(a)(2) to use system-level criticality to set the minimum level of rigor in developing and testing each computing system safety item. The FAA agrees with the comments received on the shortcomings of allocation by degree of autonomy and the recommendation to use a system safety approach to computing system safety. System safety allocates level of rigor according to the criticality of each item in the system, and the revised regulation aligns software and computing system level of rigor allocation with system safety's level of rigor allocation, erasing a difference between the two safety analyses.[138] For some systems, system-level criticality and degree of autonomy will produce the same or similar allocations of rigor in computing system development. An applicant can propose to use degree of autonomy as a proxy for system-level criticality based on that similarity, as it is an industry standard method of determining level of rigor allocation. This revision achieves the objective stated in the NPRM of tailoring safety requirements based on criticality but eliminates the prescriptive criticality levels proposed in the NPRM. The criticality of each computing system or function must be assessed at the system level so the applicant can clearly demonstrate to the FAA how the system uses computing systems and the influence of each computing system safety item on public safety.

Section 450.141(b) requires an operator to develop safety requirements for each computing system safety item. A safety requirement specifies the implementation of one or more public safety-related functions, capabilities, or attributes in a computing system safety item. The FAA notes that it uses the phrase ''safety requirements'' in the final rule differently than it did in the NPRM. In the NPRM, ''software safety requirements'' referred to regulatory requirements for software. In § 450.141 of the final rule, ''safety requirements'' means computing system requirements that specify computing system attributes or functionality that have public safety significance. Identification of this subset of computing system requirements related to public safety is essential to focus an operator's safety efforts on those parts of the computing system safety item that have public safety consequences. It will also streamline the scope and depth of data required of applicants and the FAA's evaluation process relative to current requirements, to the same extent as proposed § 450.111.

Section 450.141(b)(1) requires an operator to identify and evaluate safety requirements for each computing system safety item. Safety requirements are the subset of requirements that define features, capabilities, or behaviors that have public safety implications. This identification and evaluation process may identify new computing system safety items if safety requirements are identified for items that did not previously have known safety requirements.

Section 450.141(b)(2) requires an operator to ensure the safety requirements are complete and correct. A computing system requirement set is complete if it contains all of the requirements necessary to specify all of the functions and attributes needed for the computing system to perform its required tasks. A computing system requirement is correct if it specifies the correct functionality or attributes for the item to perform its intended system-level functions. This can be accomplished as part of an applicant's normal software and computing system requirement review process. The FAA does not require the applicant to conduct a separate public safety-specific review, provided the applicant's computing system requirement review process accomplishes the intent of § 450.141(b)(2).

Section 450.141(b)(3) requires an operator to implement each safety requirement. That is, the safety requirements reviewed in accordance with § 450.141(b)(2) must be built into the system for verification in § 450.141(b)(4). Requirements are normally implemented by operators, and no special implementation process is required for safety requirements.

Section 450.141(b)(4) requires that the applicant verify and validate the implementation of each safety requirement using a method appropriate for the level of criticality of the computing system safety item. Computing system requirements are normally verified and validated by a combination of testing, analysis, and inspection. The NPRM proposed to require specific testing and verification methods that have not been retained in the final rule due to the removal of specific criticality levels for software. The final rule allows sufficient flexibility for operators to implement methods and levels of rigor appropriate for their operations. For example, a development process that traces from computing system requirements to verification and validation evidence is necessary but may not be the only process for adequate verification and validation; a process that traces from verification and validation tests to the intended computing system functionality may be more appropriate for third-party products. Operators may use many different processes that accomplish traceability as long as the process demonstrates that the verification and validation evidence is sufficient to verify and validate all of

[138] Since the approach in proposed § 450.111 of using degrees of autonomy was largely informed by MIL–STD–882E, this revised approach in § 450.141 of the final rule will reduce confusion and error caused by translating between different allocation schemes already adopted by other industry standards. This will also improve the rule's resilience to future changes to standards.

the computing system safety requirements.

Section 450.141(b)(4) further specifies that, for each computing system safety item that meets the definition of ''safety critical'' in § 401.7, verification and validation must include testing by a test team independent of the development division or organization. As defined in § 401.7, a safety-critical item means a system, subsystem, component, condition, event, operation, process, or item, whose proper recognition, control, performance, or tolerance, is essential to ensuring public safety. A safety-critical computing system safety item is a computing system safety item of which proper recognition, control, performance, or tolerance is essential to ensuring public safety. As described in the NPRM, the FAA uses the term ''independent'' to designate a verification and validation group that has substantial and credible independence from the development team. This independent group has a separate personnel structure through at least senior leadership, operates under distinct performance, technical, schedule, and incentive pressures, and has the latitude to develop and test requirements independently. This independent verification and validation group can be a third party or an in-house group but in either case must have the technical, managerial, schedule, and incentive independence [139] to carry out its functions without undue pressure from the development team. The requirement for independent verification and validation of safety-critical computing system safety items is broadly aligned with current practices for verification and validation. Specifically, the minimum expectation is that safety-critical computing systems, such as autonomous FSS, are subjected to a level of verification and validation rigor that can only be achieved by verification and validation staff that are independent of the development organization.

The requirement in proposed § 450.111(b) to identify all safety-critical functions involving software is revised and included in § 450.141(b) of the final rule. Section 450.141(b) requires the applicant to identify all safety requirements performed by computing system safety items, check that the safety requirements are complete and correct, implement the safety requirements, and verify and validate their implementation including independent verification and validation for safety-critical computing system safety items. These regulatory requirements have the net effect of identifying all safety-critical functions involving computing systems, since safety requirements necessarily include all safety-critical functions, capabilities, and attributes of computing systems.

Section 450.141(c) requires operators to implement and document a development process for computing system safety items identified in § 450.141(a) appropriate for the level of criticality of the computing system safety item. The requirement to implement and document such a development process for all computing system safety items is substantially similar to both existing rules and the requirements proposed in § 450.111, except in the final rule the requirement is no longer contained in separate subsections for each level of autonomy (proposed § 450.111(d) through (g)). As explained in the NPRM preamble, the FAA needs to understand the computing system development processes used for each computing system safety item, relative to its effect on public safety, in order to assess computing system safety. The final rule calls for a development ''process,'' rather than a ''plan,'' that achieves the same objectives key to a development plan but affords applicants greater flexibility to structure their processes as needed to satisfy § 450.141(c). Operators need not employ a separate development process for each computing system item. However, the development process must be appropriate to the level of criticality of each computing system safety item to which it is applied, and must satisfy the criteria listed in § 450.141(c), at a minimum.

In order to demonstrate that a development process is appropriate to the level of criticality of each computing system safety item, an operator would need to identify the tasks associated with each safety item, along with its processes for reviewing, verifying, and validating computing system safety requirements. Section 450.141(c)(1) requires a development process to define responsibilities for each task associated with a computing system safety item. This requirement derives from the requirement proposed in § 450.111(d)(5) for a software development plan; in order to be acceptable, the development process must assign responsibilities for its execution. This requirement intends to ensure that development tasks for computing system safety items are carried out by defined personnel in the organization, though not necessarily individuals by name.

Under § 450.141(c)(2), a development process must include processes for internal review and approval, including review that evaluates the implementation of all safety requirements, such that no person approves their own work. This is consistent with proposed § 450.111(d)(4), which required independent verification and validation, and proposed § 450.111(d)(5)(i), which required coding standards. Neither of those requirements could be met in absence of a review and approval process that meets § 450.141(c)(2) of the final rule, since acceptable performance of those tasks inherently includes review and approval by a person independent of those who did the work. Software and computing system development is a complex set of actions, and some subsets of those actions are milestones that require review and approval. This requirement means that those reviews and approvals must have some degree of independence such that no person approves their own work, and requires that the minimum set of reviews and approvals contains reviews of the implementation of safety requirements. This association is defined by generation, such as code written to implement a safety requirement, or by interaction, such as code that must function in order for a safety requirement to be met. Code reviews conducted to meet this requirement need not be single events but may be modularized in a manner similar to the code itself as long as comprehensive understanding is communicated between modular reviews. Computing system development efforts that use pre-commit and post-commit reviews to conduct a modularized code review process could meet § 450.141(c)(2). The intent is that code developed to implement safety requirements should be checked by at least one independent technical reviewer prior to its release.

Section 450.141(c)(3) requires the operator to ensure that development personnel are trained, qualified, and capable of performing their roles. This is consistent with § 450.111(d)(5)(i) of the NPRM, which required coding standards, which are an implicit part of the training of development personnel. The final rule makes this implicit requirement in the NPRM explicit. Personnel responsible for public safety tasks must have training and experience that enables them to discharge their responsibilities effectively. In its

[139] Incentive independence means that the independent verification and validation group is rewarded based on some metric other than schedule or throughput, so that the schedule or throughput demands that drive error rates upward do not also drive testing thoroughness downward.

application review, the FAA does not intend to verify the qualifications of individual development personnel, but rather to verify that the operator has a process in place to put appropriately-trained and experienced personnel in public safety roles.

Section 450.141(c)(4) requires a development process to define processes that trace requirements to verification and validation evidence. This requirement is a performance criterion that was implicit in the proposed § 450.111(d)(5) software development plan; FAA is making this criterion explicit and performance-based in the final rule to address commenters' concerns. Traceability from computing system requirement to verification and validation evidence significantly streamlines computing system safety evaluations by connecting the requirements that define a computing system's capabilities to evidence of their implementation. Importantly, this requirement applies to all requirements for computing system safety items, as a lack of rigor inmanaging requirements on any computing system safety item is an opportunity for undocumented or unintended computing system safety requirements to be introduced into the system.

Section 450.141(c)(5) requires a development process to define processes for configuration management that specify the content of each released version of a computing system safety item. This requirement is a performance-based version of proposed § 450.111(d)(5)(ii), which required configuration control. Configuration management at this level of performance is the baseline expectation for any computing system safety item because a known configuration with a known history is required to provide adequately for safety. The revised requirement contains the performance criteria that were implicit in the NPRM.

Section 450.141(c)(6) requires a development process to define processes for testing that verify and validate all safety requirements to the extent required by § 450.141(b)(4). This means that safety requirements must be tested in a manner consistent with their level of criticality. The FAA removed a prescriptive requirement proposed in the NPRM for testing on flight-like hardware [140] to increase flexibility. The FAA requires verification and validation that is appropriate for the level of criticality of the computing system safety item, and allows the operator to define the levels of criticality that are appropriate for its operations. The operator must determine, and the FAA will verify, which of the operator's levels of criticality affect public safety and which of the computing systems described in the proposed operation are in each of those public safety levels. Operators must then define verification and validation procedures to test computing system safety items in appropriately representative environments.

Section 450.141(c)(7) requires a development process to define reuse policies that verify and validate the safety requirements for reused computing system safety items. This requirement was retained from proposed § 450.111(d)(5)(v), which similarly required an operator to develop and implement software development plans, to include descriptions of a policy on software reuse. In essence, the applicant is required to have processes in place to understand the safety implications of any computing system safety item developed for a different project or purpose.

Section 450.141(c)(8) requires a development process to define third-party product use policies that verify and validate the safety requirements for any third-party product. This requirement was retained from proposed § 450.111(d)(5)(iv), which required an operator to develop and implement software development plans, to include a description of a policy on use of any commercial-off-the-shelf software. The FAA replaces the term ''commercial-off-the-shelf software'' in the proposal with ''third-party product'' because commercial software is not the only kind of third-party computing system that an applicant could use; government-off-the-shelf and free, open source products need strategies for safe use, and the policy does not need to vary based on the nature of the third party. The important characteristic is that the computing system was not developed by the applicant, so FAA now uses ''third-party'' to describe it. The final rule sets performance criteria for this requirement with the addition of the phrase ''that verify and validate the safety requirements in any third-party product.'' This means that the safety requirements implemented by third-party products must be subjected to verification and validation just like applicant-developed computing system safety items.

Section 450.141(d) contains the application requirements for this section. Each of the first five requirements in paragraph (d) mirrors a key aspect of computing system safety, allowing the applicant and FAA to understand the rigor of development in terms of public safety. This structure is meant to reflect the typical formats of computing system safety data submissions received by the FAA to date. The regulation requires an applicant to describe the computing system safety items, identify the safety requirements implemented by each computing system safety item, provide the development processes that generated them, provide evidence that the development process was followed, and provide data verifying the correct implementation of the safety requirements. These application requirements need not be met in separate documents.

The application requirements of § 450.141(d) essentially replicate those proposed in § 450.111(h), except that the revised regulation allows greater latitude to implement development processes that achieve the same goals by different means. An example of such an alternative process would be a formal mathematical proof that the code will function only as designed and that the design meets all of its requirements. A formal proof is preferable to an iterative development and testing process, whenever practical, because a formal proof demonstrates that every possible action that a computing system system can take is safe whereas iterative development can only approximate that demonstration. A formal proof would have required waivers under proposed § 450.111 but will not under § 450.141.

Several commenters recommended that hazards associated with computing systems and software be addressed through other sections in part 450, rather than in a dedicated section on computing systems and software. CSF, SpaceX, Virgin Galactic, and Virgin Orbit stated that hazards associated with computing systems and software should be addressed through the system safety requirements for flight hazard analyses, proposed § 450.109. CSF commented that a computing system was just one of many critical subsystems integrated into a larger complex system, that all systems and subsystems should be analyzed and controlled for hazards, and that the fact that a particular system may contain software should be irrelevant to top level performance-based safety requirements. Blue Origin and CSF recommended that the requirements for safety-critical systems in § 450.143 be used for software

[140] For each level of criticality in proposed 450.111(d) through (g), the FAA proposed that the software component's safety-critical functions must be tested on flight-like hardware, which must include nominal operation and fault responses for all safety-critical functions.

systems. SpaceX recommended that hazard analyses be limited to demonstrating one fault tolerance for safety-critical functions, including tolerance to faults in any inputs to the functions (*e.g.,* data loss, data corruption) and any downstream hardware or software effects required for public safety (*e.g.,* effecting thrust termination).

The FAA will retain a separate section for computing system requirements in the final rule. As stated in the NPRM preamble, the FAA consolidated the computing system safety requirements applicable to launch or reentry operations under a single section in § 450.141 of the final rule to address software, firmware, and data, and the way they operate in computing systems. The FAA based this approach on a determination that software safety cannot be evaluated outside of the computing system in which it operates. Software and computing systems are decision engines that, like humans, control other vehicle systems that can present hazards to the public and therefore merit analysis of their control logic. Although computing systems and software must be factored into an operator's system safety process and hazard control strategies, the FAA has determined that computing systems warrant separate consideration due to distinct characteristics that make them uniquely ill-suited to most traditional system safety methods.

Software assurance is often a more appropriate mitigation strategy than fault tolerance for software faults. The FAA anticipates that any emergent method for system safety analysis that handles software and computing systems well will meet § 450.141 because such a method would necessarily produce the essential elements of computing system safety embodied in the regulation. That is, § 450.141 applies equally well to dedicated computing system safety analyses and to system safety analyses that handle computing systems in an integrated manner.

Furthermore, although computing systems can be ''safety critical,'' as defined in § 401.7, the FAA declines to apply the requirements set forth in § 450.143 regarding safety-critical system design, test, and documentation to computing systems because those requirements do not adequately address the idiosyncrasies of computing systems. For example, § 450.143(b) in the final rule requires an operator to design safety-critical systems to be fault-tolerant, fail safe, damage-tolerant, or otherwise designed such that no fault can lead to increased risk to the public beyond nominal safety-critical system operation. Fault tolerance is not achievable for many software faults. Similarly, the predicted environments are defined and evaluated very differently for software than for other safety-critical systems under § 450.143. The predicted operating environment for computing systems is defined in computing system requirements, but those requirements are derived from the mathematical relationships that the software must embody, so the requirement to provide predicted environments for computing systems is indistinguishable from providing the computing system requirements and design documentation for computing systems.

Blue Origin, CSF, Sierra Nevada, Virgin Galactic, and Virgin Orbit commented that any prescription in the regulation should be moved to an AC as a means of compliance. Virgin Galactic commented that guidance material should be based on industry standard development assurance processes. CSF suggested that ACs reference industry standards and to refer to new or existing FAA ACs, such as AC 20–115C, AC 20–152, AC 20–153, AC 20–170, and AC 20–174, to provide a detailed means of compliance to performance-based regulations for computing systems.

As discussed, the FAA has revised the proposed requirements to be less prescriptive in the final rule. The FAA regulates software assurance only to the extent that it is used as a mitigation strategy for computing system hazards. The FAA plans to issue guidance that will provide further clarity on the requirements in § 450.141, including the integration of existing software assurance standards, such as the referenced ACs, with computing system safety processes. The FAA considers these changes in the final rule to be consistent with the comments received.

Blue Origin, CSF, Rocket Lab, SpaceX, and Virgin Galactic commented that the requirements in proposed § 450.111 did not integrate well with most industry applications and best practices. CSF and SpaceX commented that the methods prescribed by the proposal were incompatible with proven industry standards such as ISO 26262 [141] and DO–178C.[142]

The FAA revises the regulation in a way that aligns better with the system safety process and replaces the prescriptive requirements identified by commenters with performance-based metrics. The final rule also aligns better with industry standards, including ISO 26262 and DO–178C. Virgin Galactic noted similarities between proposed § 450.111 and existing standards, and this similarity is intentional as the FAA was attempting to codify those parts of industry standards that were well suited to standardization. The final rule bears less similarity to existing standards, instead specifying the goals of those standards as requirements in § 450.141. The FAA has revised the computing systems and software safety requirements to contain the minimum set of performance requirements necessary to address the public safety implications of a given operation. The FAA also removed many prescriptive requirements from the regulation. This revision allows for more flexibility and thus consistency with industry standards.

CSF, SpaceX, and Virgin Galactic commented that the proposed rule was not comprehensive enough and was missing items such as aeronautical databases, integrated modular avionics, regression testing, and other details. Blue Origin, CSF, and SpaceX stated that the proposal failed to address object-oriented technology, model-based development, machine learning, tool qualification, load control, formal methods, robust protection and partitioning, integrated modular avionics, and integration with the system process.

As discussed, the final rule has been revised to remove prescriptiveness and increase flexibility. Therefore, because such prescription was removed from the final rule, the FAA does not find the changes recommended by these comments to be necessary. The FAA will address items like aeronautical databases, integrated modular avionics, regression testing, and other details in guidance documents. These items will be addressed by § 450.141(c), which implements safety requirements for these and all other computing system safety items.

An individual commenter suggested that all hardware dependent on software be vertically integrated and signal proof to protect against issues posed by cyber

[141] ISO 26262 is an adaptation of the Functional Safety standard IEC 61508 for Automotive Electric/Electronic Systems. ISO 26262 defines functional safety for automotive equipment applicable throughout the lifecycle of all automotive electronic and electrical safety-related systems.

[142] DO–178C, Software Considerations in Airborne Systems and Equipment Certification, is the primary document by which the certification authorities such as FAA, EASA, and Transport Canada approve all commercial software-based aerospace systems. The FAA approved AC 20–115C July 2013, making DO–178C a recognized ''acceptable means, but not the only means, for showing compliance with the applicable airworthiness regulations for the software aspects of airborne systems and equipment certification.''

security or signal interference. The FAA does not believe a change to the regulations is necessary. Issues posed by cyber security or signal interference that could pose a threat to public safety are adequately addressed by the hazard identification and mitigation requirements in § 450.141.

SpinLaunch recommended that the proposed set of software requirements, compliance plans, and test data be replaced with the requirement either to submit a software plan and sample results or to demonstrate the capability of the software to perform as required.

The requirement that an operator either submit a software plan and sample results or demonstrate the capability of the software would not protect public safety adequately for three reasons. First, a software plan is insufficient without evidence of its execution. Section 450.141 requires an operator to document a development process for all computing system safety items and provide evidence of its execution. Second, the minimum set of sample results that would be sufficient to verify protection of the public is the set that meets the requirements in § 450.141(b)(4) for verification of public safety-related functionality. Third, an adequate demonstration of software capability necessarily will include the level of testing specified by § 450.141. For these reasons, the FAA does not see a distinction between § 450.141 and either the submission of a software plan and sample results or a demonstration of software capability.

y. Safety-Critical Systems Design, Test, and Documentation (§ 450.143)

In the NPRM, the FAA proposed standalone performance-based requirements for safety-critical systems in § 450.143. The proposed requirements covered fault tolerance, qualification testing, acceptance of hardware, and lifecycle management for all safety-critical systems including FSS.[143] In the NPRM, the FAA noted that applicants using an FSS of any reliability threshold would be required to meet the proposed § 450.143 safety-critical system design, test, and documentation requirements.[144] In addition, under proposed § 450.143(a), operators required to use an FSS under § 450.101(c) would be required to meet the standards in § 450.145.

The FAA also proposed to revise the definition of ''safety critical'' in § 401.5. As proposed, ''safety critical'' retained the longstanding definition of being something ''essential to safe performance or operation,'' and the proposed definition further explained that a safety-critical system, subsystem, component, condition, event, operation, process, or item, is one whose proper recognition, control, performance, or tolerance, is essential to ensuring public safety. The FAA proposed to remove language in the existing definition stating that something is ''safety critical'' if it creates a safety hazard or provides protection from a safety hazard, because that language is redundant.

In the final rule, the FAA adopts § 450.143 with some revisions discussed later in this section. The FAA also adopts the proposed definition of ''safety critical'' without substantive change and relocates it to § 401.7. Based on the change to the definition of ''public'' in the final rule, the FAA changes the reference to ''public safety'' in the definition of ''safety critical'' to ''public safety and the safety of property.''

Blue Origin, CSF, and one individual commented that the term ''safety critical'' was ambiguous in light of the proposed revision to § 401.5.

A system is safety critical if its performance is essential to safe performance or operation. If the failure of a system can create a hazard to the public, then the system is a safety-critical system. Section 450.143 would apply to a safety-critical system unless an operator demonstrates through its flight hazard analysis that the likelihood of any hazardous condition associated with the system that may cause death or serious injury to the public is extremely remote, pursuant to § 450.109(b)(3). Due to the inherent risk to the public, an operator must demonstrate the reliability of a safety-critical system by meeting the requirements of § 450.143.[145]

The applicant's identification and proper management of safety-critical systems is fundamental to mitigating potential hazards and ensuring public safety, and the FAA will work with an applicant if it believes the applicant has failed to identify all safety-critical systems. The potential failure of safety-critical systems is integral to the FSA, and the vulnerabilities of safety-critical systems must be accounted for in the flight commit criteria, hazard analyses, lightning protection criteria, management of radio frequency to prevent interference, and communications plans.

Virgin Galactic commented that the requirements of § 450.143 are costly, time-consuming, burdensome, and contrary to the Commercial Space Launch Act requirement to only regulate to the extent necessary. Virgin Galactic requested that an applicant not be mandated to comply with § 450.143 if it can provide proof that a safety-critical system meets the safety criteria.

The FAA acknowledges that, under certain circumstances, an operator could demonstrate that a safety-critical system would not need to have the robust design and testing required of § 450.143. The FAA considered relieving an operator from the requirements in § 450.143 if the safety criteria in § 450.101 were met. However, the FAA found that use of the safety criteria for this purpose is not appropriate because whereas the requirements in § 450.143 apply to safety critical systems—which, as defined, can be a system, subsystem, component, condition, event, operation, process, or item—the safety criteria in § 450.101 measure the effects of the failure modes of the vehicle as a whole, as analyzed in the FSA. Therefore, demonstrating compliance with the safety criteria in § 450.101 is not sufficient to relieve an operator from the requirements in § 450.143, because that alternative would relieve the operator from analyzing the vehicle's discrete systems, subsystems, components, conditions, events, operations, processes, and items. The FAA finds that analysis at this more discrete level is necessary to ensure safety of the public.

The FAA finds that a more appropriate method to provide flexibility and be responsive to Virgin Galactic's concern is to rely on the flight hazard analysis in § 450.109. Specifically, the FAA revises § 450.143(a) to exclude safety-critical systems for which an operator demonstrates through its flight hazard analysis that the likelihood of any hazardous condition specifically associated with the system that may cause death or serious injury to the public is extremely remote, pursuant to § 450.109(b)(3). As explained in the preamble section associated with

[143] As noted in the NPRM, an FSS is an integral tool to protect public health and safety and the safety of property from hazards presented by a vehicle in flight. An FSS allows an operator to exercise positive control of a launch or reentry vehicle, enabling an operator to destroy the vehicle, terminate thrust, or otherwise achieve flight abort. A highly reliable FSS that controls the ending of vehicle flight according to properly established rules nearly ensures containment of hazards within acceptable limits. For that reason, the FAA considers an FSS a safety-critical system. *See* 84 FR 15326.

[144] *See* 84 FR 15329.

[145] In addition to § 450.143, requirements in the final rule that apply to safety-critical systems are also found in §§ 450.45(e)(3)(ii)(C), 450.103(c)(1), 450.103(d)(4), 450.107(b)(2), and 450.107(d)(1)(ii). These requirements are discussed within those sections.

§ 450.109, the flight hazard analysis focuses on the reasonably foreseeable hazards to public safety resulting from the flight of a launch or reentry vehicle. In performing the flight hazard analysis, the operator is required in § 450.109(b)(1)(ii) to identify reasonably foreseeable hazards and corresponding failure modes relevant to public safety resulting from system, subsystem, and component failures or faults. Therefore, unlike the safety criteria in § 450.101, the flight hazard analysis explicitly requires the operator to examine the hazards associated with the discrete systems, subsystems, and components of the vehicle.

Thus, to provide increased flexibility without reducing safety, the final rule excludes certain safety-critical systems from the requirements of § 450.143 if an operator demonstrates through its flight hazard analysis that the likelihood of any hazardous condition specifically associated with the system that may cause death or serious injury to the public is extremely remote, pursuant to § 450.109(b)(3). That is, the operator must show that specific requirements in § 450.143, which ensure that the system will function reliably, are not entirely necessary to mitigate the hazards specifically associated with the system to an extremely remote level.

For example, an operator's launch vehicle may have a number of systems whose failure could potentially cause hazardous debris to impact the public. If an operator chooses to launch in a sparsely populated area and limit propellant loading to minimize risk to the public to an extremely remote level despite the failure of one or more safety-critical systems, then those systems would not need to be designed or tested to the level set forth in § 450.143. The operator must show that the exception in § 450.143(a)(2) applies for a particular safety-critical system through its flight hazard analysis. If the operator cannot show that all hazards involving the system are sufficiently mitigated to an extremely remote level despite a failure of that system, then that system must meet the design and testing requirements in § 450.143.

However, the FAA anticipates that certain systems will not qualify for the exception in § 450.143(a)(2). Specifically, safety critical systems that prevent hazards from reaching the public given other system failures would likely be required to meet § 450.143. This is also true of systems that create hazards to the public that are not otherwise mitigated by other hazard controls. The FAA anticipates that it is unlikely that an operator would be able to demonstrate that the hazards associated with these systems meet the ''extremely remote'' standard in § 450.109(b)(3) without subjecting them to the reliability requirements in § 450.143. Furthermore, FSS required by § 450.108(b)(2) must meet § 450.143 without exception.

The FAA also revises § 450.143(a) and removes the proposed requirement that all FSS required by § 450.101(c) must meet §§ 450.143 and 450.145. Instead, § 450.143(a) requires all safety-critical systems except for the highly reliable FSS required by § 450.108(b)(1) to meet the requirements in § 450.143. As discussed in the flight abort section of this preamble, an FSS required by § 450.108(b)(2) must comply only with § 450.143 rather than meeting the additional requirements proposed in § 450.145. Likewise, an operator who chooses to use flight abort as a hazard control strategy for reasons other than protecting against a high consequence event under § 450.101(c)(1) must also satisfy the requirements of § 450.143 for its FSS. For reasons explained later in this section, highly reliable FSS under § 450.145 do not need to comply with the general safety-critical systems requirements of § 450.143 as was proposed in the NPRM.

The FAA proposed in § 450.143(b) to require that all safety-critical systems follow reliable design principles. Specifically, an operator would be required to design those systems to be fault-tolerant so that no single credible fault could lead to increased risk to the public.

Both Sierra Nevada and Virgin Galactic commented that requiring fault tolerance would be so burdensome to the applicant that several current operators would not be able to meet the requirement for systems on existing vehicles. Sierra Nevada commented that using fault tolerance as a catch-all hazard control can add risk in certain cases, and the determination regarding whether something is fault-tolerant is not straightforward.

Fault tolerance [146] is the idea that a system must be designed so that it is able to perform its function in the event of a failure of one or more of its components. In a fault-tolerant design of a safety-critical system, no single credible fault should be capable of increasing the risk to public safety beyond that of a nominal operation. Although the FAA proposed fault tolerance for the design of safety-critical systems in the regulatory text, the FAA intended to accept other methods of safety design, including fail-safe [147] and damage-tolerant [148] systems like primary structures that generally cannot be redundant. This broader view of safe design allows an operator to factor planned operational restrictions, testing, and inspection into the design to demonstrate that a system is broadly fault-tolerant.

The FAA acknowledges that its articulation of a fault-tolerant design requirement in the proposed regulation did not accurately reflect the FAA's statements in the NPRM preamble allowing other methods of safe design, like fail-safe systems, damage-tolerant systems, or other designs for graceful degradation.[149] A system that is designed to be fail-safe or degrade gracefully, whether it functions at a reduced level or fails completely, does so in a way that protects people and property from injury or damage, or generally prevents a more serious failure event. Such design is desirable, and was intended to be captured in the FAA's design requirements for safety-critical systems. In the final rule, the FAA amends § 450.143(b) to state only that safety-critical systems must be designed such that no credible fault can lead to increased risk to the public beyond nominal safety-critical system operation. The final rule gives the operator flexibility to achieve this requirement through a design that is fault-tolerant, fail-safe, damage-tolerant, or any other solution.

The FAA views design for reduced risk as a necessary characteristic of any reliable system. The FAA recognizes there may be other acceptable design principles that protect the public adequately from or in spite of a credible fault. In the final rule, the FAA removed the word ''single'' from § 450.143(b) to clarify that some design concepts may allow faults, but that the faults should not lead to increased risk to the public. The FAA also removed ''safety'' from § 450.143(b) because ensuring no increased risk to the public necessarily addresses public safety. An applicant

[146] Typically, a fault-tolerant design applies redundancy or a system of safety barriers to ensure the system can function, though perhaps with reduced performance. An example of a fault-tolerant design is an aircraft with multiple engines that can continue flying even if one of the engines fails.

[147] A fail-safe design is a system that can fail in a controlled way, such that the failure will still ensure public safety, like elevator brakes held open by the tension of the elevator cable such that, if the cable snaps, the brakes engage and stop the elevator from falling.

[148] Damage-tolerant design allows for robust design, or design to fail gracefully, for systems like a vehicle hull that cannot be redundant or fail-safe. Fault-tolerant, fail-safe, and damage-tolerant designs are all design concepts meant to prevent credible faults or prevent increased risk to the public if failures do occur.

[149] 84 FR 15325–15326.

may demonstrate that no credible fault can lead to increased risk through analysis, identification of possible failure modes, implementation of redundant systems or other mitigation measures, and verification that the mitigation measures will not fail simultaneously.

Safety-critical systems requirements necessitate testing that accounts for the operating environment the system will encounter. For that reason, the FAA proposed to define ''operating environment'' in § 401.5 (§ 401.7 in the final rule) as ''an environment that a launch or reentry vehicle component will experience during its lifecycle.'' The proposed definition further stated that operating environments include shock, vibration, thermal cycle, acceleration, humidity, and thermal vacuum.

In the final rule, the FAA adopts the proposed definition with additional language indicating that operating environments also include other environments relevant to system or material degradation. As stated in the NPRM, the list of examples in the definition is not exhaustive, and the additional language in the final rule establishes a standard for operators to consider in assessing relevant environmental factors when qualifying an FSS or other safety-critical system design through testing and analysis.

In addition to meeting the design requirements of § 450.143(b), the FAA proposed qualification testing [150] requirements in § 450.143(c) that required, in part, that an operator demonstrate the design of the vehicle's safety-critical systems functionally at conditions beyond its predicted operating environment. An operator must select environmental test levels that ensure the design is sufficiently stressed to demonstrate that system performance is not degraded due to design tolerances, manufacturing variances, or uncertainties in the environment. Qualification testing will demonstrate margin over all operating and non-operating environments to which the flight unit can be exposed, including margin over all component acceptance tests. Valid qualification testing environments should—

- Account for material variation, because all materials have properties that have a variance from nominal values.
- Account for manufacturing variation, because the functionality of a system is not only dictated by the quality of materials used, but also the quality of the manufacturing processes employed.
- Account for environmental variation, because environmental predictions can have a great deal of uncertainty, particularly early in a program.
- Demonstrate margin against failure, because safety-critical systems often fail in complex and unpredictable ways.

The FAA also proposed requirements for acceptance [151] of hardware in § 450.143(d) that required, in part, an operator to demonstrate any safety-critical system functionally while exposed to its predicted operating environment with margin to demonstrate that it is free of defects, free of integration and workmanship errors, and ready for operational use. Acceptance testing on flight units should uncover critical workmanship errors, and damaged, weak, or out-of-specification components before they fail in flight. Because this testing is done on flight units, valid acceptance testing should avoid over-testing safety-critical components. This avoidance is accomplished by testing significantly under qualification levels and durations, but still over nominal operation levels and durations. The FAA adopts these requirements as proposed, with minor editorial corrections.

Lastly, the FAA proposed requirements pertaining to the lifecycle of safety-critical systems in § 450.143(e), which required an operator to monitor the flight environments experienced by safety-critical system components to the extent necessary to validate the predicted operating environment.[152]

In the final rule, the FAA makes one minor revision to § 450.143(c), (d), and (e). In each of those subsections, the FAA has changed the term ''operating environment'' to ''operating environments'' because all systems will experience multiple operating environments. As stated in the NPRM preamble,[153] applicants must account for all operating environments that any safety-critical system is expected to encounter throughout the lifecycle of the system in accordance with § 450.143(e), including storage, transportation, installation, and flight, which generally are built into qualification and acceptance testing levels. Other than this minor revision, the FAA adopts these subsections as proposed. Note also that in the means of compliance table released with the NPRM, the FAA identified SMC–S–016, ''Test Requirements For Launch, Upper-Stage and Space Vehicles,'' as an acceptable means of compliance with § 450.143. SMC–S–016 is an Air Force standard that defines environmental test requirements for launch vehicles, upper-stage vehicles, space vehicles, and their subsystems and units. The FAA maintains that the environmental test levels in that standard are acceptable for safety-critical systems under § 450.143, except, as noted in the means of compliance table, protoqualification testing testing found in 4.2.3 and B.1.3–4, and protoqualification by similarity in 4.10.1.[154]

As noted earlier, FSS required pursuant to § 450.108(b)(2), when the consequence of any reasonably foreseeable failure mode in any significant period of flight is between 1×10^{-2} and 1×10^{-3} CE_C for uncontrolled areas, must satisfy the requirements in § 450.143. This approach is consistent with the NPRM, which required all safety-critical systems including all FSS to satisfy the general requirements in § 450.143. For the reasons explained more fully in the next section, the final rule does not adopt the additional requirements for such an FSS that were proposed in § 450.145(a)(2), which would have required the FSS to have a design reliability of 0.975 at 95 percent confidence and commensurate design, analysis, and testing. The FAA no

[150] Qualification testing is an assessment of a prototype or other structural article to verify the structural integrity of a design. Generally, functional demonstration of the design's qualification at operating environments involves testing the design under a number of different environmental factors to stress the design, with a multiplying factor applied to the expected environmental testing limit. This qualification testing is conducted for temperatures, tensile loads, handling shocks, and other expected environmental stressors relevant to system or material degradation.

[151] Unlike qualification testing that is performed on qualification units, acceptance testing or other functional demonstration of acceptance required by § 450.143(d) is performance testing conducted on the actual hardware to be used on a vehicle after the completion of the manufacturing process. Generally, acceptance tests are performed on each article of the safety-critical flight hardware to verify that it is free of defects, free of integration and workmanship errors, and ready for operational use. Acceptance testing includes testing for defects, along with environmental testing similar to the qualification testing described earlier.

[152] Applicants must account for environments that any safety-critical system is expected to encounter throughout the lifecycle of the system in accordance with § 450.143(e), including storage, transportation, installation, and flight, which generally are built into qualification and acceptance testing levels.

[153] 84 FR 15323.

[154] Protoqualification is used when test hardware is planned to be used for flight, generally for designs that will have limited production. Tests conducted to demonstrate satisfaction of design requirements use reduced margins, supplemented with other analyses and tests.

longer finds this reliability value necessary because, as a commenter noted, it was unnecessarily prescriptive.[155] Moreover, as discussed in the NPRM, there are no established standards to demonstrate the 0.975 reliability number, other than a single string FSS that otherwise meets the requirements of RCC 319.

Instead, the FAA requires § 450.108(b)(2) FSS to meet the requirements in § 450.143. This regulatory approach should support ongoing innovation in the development of FSS. As noted in the NPRM, the commercial space transportation industry has continued to mature and operators have proposed FSS alternatives. These alternative approaches include fail-safe single string systems that trade off mission assurance and redundancy, other fail-safe consequence mitigation systems, and dual-purpose systems such as FSS that reuse the output of safety-critical GPS components for primary navigation avionics. The FAA is publishing a ''Safety-Critical Systems'' AC to provide an acceptable means of compliance with § 450.143. However, the FAA does not claim that an FSS approved under § 450.143 necessarily has a reliability of 0.975. Although some standard in the future may be able to establish a reliability of 0.975 at 95 percent confidence, that standard does not exist today. FSS are discussed more fully in the next section of this preamble.

The FAA amends the proposed application requirements in § 450.143(f) for safety-critical systems to require that applicants describe the methods used to validate the predicted operating environments. In order to comply with § 450.143(e)(2)(i), applicants must validate the predicted operating environments for their safety-critical systems. However, the NPRM inadvertently omitted the corresponding application requirement from proposed § 450.143(f). This change results in no additional burden as an operator would have to demonstrate compliance with the substantive provision by providing this information.

The FAA also adds new § 450.143(f)(7) to the application requirements, which requires an applicant to describe the standards used in each phase of a safety-critical system's lifecycle. This addition is consistent with current practice and will not increase the burden on operators, because an operator would likely provide this information to support its finding that a safety-critical system is designed such that no credible fault can lead to increased risk to the public beyond nominal safety-critical system operation. In addition, this description of standards is necessary to help identify previous flights of a vehicle developed and launched or reentered in similar circumstances, as required under § 450.131(d)(1).

Virgin Galactic asked how the requirements of § 450.143 would apply to safety-critical systems that have been licensed previously. Virgin Galactic generally objected to proposed § 450.143, arguing its requirements were similar to aircraft certification rules and would be appropriate for a more mature industry. Virgin Galactic requested an exclusion from proposed § 450.143 for hybrid vehicles that have been issued an experimental airworthiness certificate by the FAA and operate as aircraft.

As discussed in the preamble section on Hybrid Vehicles, the FAA does not agree that an airworthiness certificate issued by the FAA should automatically exempt a vehicle used in a launch or reentry from the safety-critical system requirements in § 450.143. An applicant may make an ELOS case for a component of a launch vehicle, such as a carrier aircraft, if it holds a airworthiness certificate with an acceptable flight test history. Section 450.143 is flexible and broad enough that the FAA is not aware of any currently licensed vehicles or operators in formal pre-application consultation that would not meet the new requirements. For example, operators licensed under parts 431 or 435 use a system safety process to verify and validate the reliability and mitigation of hazards for any safety-critical system. The treatment of safety-critical systems under part 431 and 435 provides an ELOS to the safety-critical systems requirements in § 450.143. Flight Safety Systems (§§ 450.143 and 450.145)

z. Flight Safety Systems (§§ 450.143 and 450.145)

As previously discussed, proposed § 450.101(c) would have required an operator to use flight abort with an FSS that meets the requirements of § 450.145 if the consequence of any reasonably foreseeable vehicle response mode, in any one-second period of flight, was greater than 1×10^{-3} CE_C for uncontrolled areas.[156]

As proposed in § 450.145(a)(1), if the consequence of any vehicle response mode was 1×10^{-2} CE_C or greater for uncontrolled areas, an operator would have been required to employ an FSS with design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing. The FAA noted that RCC 319 is the only government standard that would meet the requirement for a design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing.

Proposed § 450.145(a)(2) required that, if the consequence of any vehicle response mode was between 1×10^{-2} and 1×10^{-3} CE_C for uncontrolled areas, an operator would have been required to employ an FSS with a design reliability of 0.975 at 95 percent confidence and commensurate design, analysis, and testing. In the NPRM, the FAA acknowledged that, although no standard exists for an FSS with this design reliability, it expected individual applicants to create their own FSS requirements based on RCC 319 and have them approved as an accepted means of compliance by the FAA prior to application submittal.[157] The FAA anticipated the industry would develop voluntary consensus standards for FSS, particularly for those FSS that are only required to have a design reliability of 0.975 at 95 percent confidence.

The FAA explained the proposed lower reliability by noting that, for operations in which the consequence of a flight failure is lower, the FSS, while still being reliable, may not need to be as highly reliable as an FSS for a vehicle operating in an area where the consequence of a flight failure is higher. As such, in order to make regulations adaptable to innovative operations while maintaining appropriate levels of safety, the FAA proposed to allow an FSS with less demonstrated design reliability for operations with lower potential consequences. In the final rule, the FAA removes the proposed requirement for an FSS with design reliability of 0.975 at 95 percent confidence, as will be discussed later in this preamble section.

In the final rule, the FAA has maintained the proposed requirement

[155] CSF commented that by binning the CE_C of a vehicle and then prescribing a fixed reliability requirement for the FSS, the risk of an unmitigated CE_C event is not consistent because the binning requires the same FSS even though the risk varies by an order of magnitude. Although the FAA does not agree with CSF's solution to move the entire concept of CE_C into an Advisory Circular, as discussed earlier, the FAA does agree that it is unnecessary to establish a fixed reliability number for all § 450.108(b)(2) flight FSS required for operations with CE_Cs that could be an order of magnitude apart.

[156] As explained in the section of the preamble on high consequence events, this proposed requirement would have applied to all phases of flight unless otherwise agreed to by the Administrator based on the demonstrated reliability of the launch or reentry vehicle during that phase of flight.

[157] The FAA indicated that this approach would be akin to ''tailoring'' RCC 319, which is current practice at Federal launch ranges.

for an operator to employ an FSS with design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing if the consequence of any reasonably foreseeable failure mode in any significant period of flight is greater than 1×10^{-2} CE_C in uncontrolled areas.[158] Operators currently meet this requirement for launches conducted under legacy regulations by tailoring RCC 319, and an operator could submit a tailored version of RCC 319 to the FAA as a means of compliance for § 450.145(b).

In the final rule, the FAA has revised the section heading for § 450.145 from ''Flight safety system'' to ''Highly reliable flight safety system'' because it now contains only those requirements for an FSS required by § 450.108(b)(1) when the consequence of any reasonably foreseeable failure mode in any significant period of flight is greater than 1×10^{-2} CE_C in uncontrolled areas. The FAA has also reorganized the section and moved the reliability requirements in proposed § 450.145(a) to § 450.145(b) with revisions.

While the design reliability required for a highly reliable FSS remains 0.999 at 95 percent confidence and commensurate design, analysis, and testing, the FAA has specified in § 450.145(b)(1) of the final rule that this reliability applies to the portion of the FSS onboard the vehicle. In addition, if a portion of an operator's FSS is ground-based, space-based, or otherwise not onboard the vehicle, the FAA has specified in § 450.145(b)(2) of the final rule that it must have the same reliability as the onboard portion; that is, 0.999 at 95 percent confidence and commensurate design, analysis, and testing. Although not all FSS have a ground portion, this requirement reflects past and current practice for launches from both Federal and non-Federal sites, in which the ground portion of an FSS and the airborne portion of an FSS are independently designed, tested, and operated to rigorous standards. This independence ensures that the appropriate command is sent by the ground-based system with a high reliability, and received and acted upon with high reliability by the onboard portion of the system, to result in the desired termination action.

The reference in § 450.145(a) to an FSS ''on the launch or reentry vehicle'' did not reflect the FAA's intention accurately, as stated in the NPRM, to include FSS not onboard the vehicle in the design reliability requirements in § 450.145.[159] Conventional FSS with onboard flight termination receivers and not-onboard command transmitter systems will have both onboard and not-onboard subsystems. Many current autonomous FSS only have onboard systems. As discussed previously, the final rule requires both onboard and not-onboard FSS systems independently to demonstrate 0.999 at 95 percent reliability. This requirement is because FSS with both onboard and not onboard systems that individually meet 0.999 at 95 percent reliability could have a combined reliability as low as 0.998 at 95 percent confidence, whereas FSS with only onboard systems would be required to have a reliability of at least 0.999 at 95 percent confidence. To ensure that FSS all meet the same standard required to protect public safety, the final rule requires that onboard systems and not onboard independently meet the 0.999 at 95 percent confidence level of reliability. The collective FSS design reliability requirement is not specifically stated in the final rule since the onboard FSS and not-onboard FSS design reliability requirements are independently defined in § 450.145 and the overall FSS design reliability is dependent on the type of FSS employed.[160]

For § 450.108(b)(1) FSS that must meet the requirements of § 450.145, unless alternative methods are accepted by the Administrator, the FAA has identified RCC 319 as an existing means of compliance to demonstrate FSS reliability. This standard is currently used by applicants that employ traditional flight abort under part 417. The FAA expects to continue the current practice of working with applicants to tailor RCC 319 in order to comply with § 450.145. A tailored RCC 319 that is used as a means of compliance for § 450.145(b) must be submitted to the FAA for acceptance prior to being included in a license application.

As noted in the previous preamble section, the FAA has removed the additional requirements proposed in § 450.145(a)(2), and is relying on requirements in § 450.143 to ensure that an FSS required by § 450.108(b)(2) is sufficiently reliable. As with the NPRM, the final rule reduces the burden on operators that have a lower potential for causing high consequence events. This change maintains the intent of the proposal to protect against high consequence events using a means different from the traditional highly reliable FSS.

As noted in the previous section, the Safety-Critical Systems AC will provide an approach to compliance with § 450.143 that modifies the provisions in RCC 319. The approach uses a menu of potential options that, when met, would demonstrate that an operator has met § 450.143. The AC will provide combinations of various tailored RCC 319 requirements that the FAA has determined demonstrate compliance with § 450.143. Some of the tailored requirements include:

- Reducing the random vibration and thermal cycle qualification test margins to a level and duration that remains above acceptance test levels;
- Reducing the number of required qualification test units;
- Reducing the minimum required sample size for ordnance lot acceptance testing and ordnance qualification testing;
- Allowing qualification by similarity with deviations to RCC 319 qualification by similarity criteria;
- Reducing the required number of thermal cycles for component level qualification thermal cycle test requirements;
- Reducing the radio frequency link margin requirements for traditional commanded FSS;
- Allowing single string fail-safe FSS;
- Reducing electronic piece parts requirements; and
- Allowing use of vehicle components or systems for FSS use such as vehicle power source or flight computer.

An operator could work with the FAA to determine what combination of options would satisfy § 450.143 for specific FSS. In addition, an operator could develop its own combination of tailored RCC requirements to demonstrate compliance, or could elect to use a different means of compliance outside of the RCC 319 requirements.

An operator may demonstrate compliance with § 450.143 through other means that adequately establish

[158] As previously explained, the FAA has replaced the term ''vehicle response mode'' with ''failure mode'' and the term ''one-second period of flight'' with ''significant period of flight,'' throughout the final rule. The basis for these changes is discussed in the preamble section on flight abort.

[159] In the NPRM, the FAA stated that the reliability standard in proposed § 450.145(a)(1) would be consistent with various sections of part 417, in particular § 417.309(b)(2), that require major FSS component systems, such as onboard flight termination systems and ground-based command control systems, to be tested to demonstrate 0.999 design reliability at 95 percent confidence. The FAA further noted that this reliability threshold would have to be demonstrated for the operation of the entire system, including any systems located on-board the launch or reentry vehicle, any ground-based systems, and any other component or support systems. 84 FR 15328.

[160] As discussed earlier in the preamble, if the consequence of any vehicle response mode is less than 1×10^{-3}, the FAA will not require an FSS or mandate its reliability if an operator chooses to use one.

design, qualification testing, and acceptance testing. As mentioned earlier, the environmental test levels in SMC–S–016 are acceptable for safety-critical systems under § 450.143, including some FSS components, except protoqualification testing found in 4.2.3 and B.1.3–4, and protoqualification by similarity in 4.10.1.

Lastly, the FAA also makes minor changes to the application requirements in § 450.145. In the NPRM, § 450.145(d) stated that an FSS includes any FSS located onboard a launch or reentry vehicle; any ground based command control system; any support system, including telemetry subsystems and tracking subsystems, necessary to support a flight abort decision; and the functions of any personnel who operate the FSS hardware or software. This provision has been moved to the definition of ''flight safety system'' and deleted from § 450.145(d).[161]

The FAA received several comments on the limited means of compliance available to demonstrate compliance with the FSS reliability requirements. Blue Origin commented that the industry had only been given one means of compliance for both tiers of FSS reliability. Blue Origin also commented that the proposal indicated the only accepted means of complying with § 450.145 would be an untailored RCC 319. Blue Origin and CSF suggested that there exist other industry and government standards that should be accepted means of compliance with the reliability requirements of § 450.145. Blue Origin and Microcosm stated that a tailored RCC 319 or SMC–S–016 should also be an accepted means of compliance. SpaceX commented that RCC 319 was an acceptable standard, but only if the document may be tailored for each operator.

The FAA clarifies that RCC 319 is a means of compliance the FAA has identified to date that ensures compliance with § 450.145, but RCC 319 is not the only possible means of compliance that the FAA will consider. The performance-based nature of § 450.145 allows an operator to submit its own unique means of compliance to the FAA. An applicant may propose a tailored version of RCC 319 prior to submitting its application as a unique means of compliance to be accepted by the Administrator. As discussed earlier, the Safety-Critical Systems AC will provide guidance to operators on how to comply with the requirements for § 450.108(b)(2) FSS. This approach uses RCC 319 as one starting point. The AC will also refer to SMC–S–016, as discussed earlier. The FAA notes that, unlike for highly reliable FSS required to meet § 450.145, for an FSS required by § 450.108(b)(2) an operator is not required to have a means of compliance with § 450.143 accepted in advance of application submittal. However, it would be advisable for an operator to consult with the FAA early in its program's development on the approach to compliance with § 450.143, whether for an FSS or other safety-critical systems.

The performance-based nature of §§ 450.143 and 450.145 also allows an industry consensus standards body to submit a proposed means of compliance to the FAA for general use. This process is discussed in more detail in the Means of Compliance section of the preamble. Applicants are encouraged to work with the FAA in pre-application consultation to discuss potential unique means of compliance. For example, for § 450.108(b)(1) FSS, an applicant could work with the FAA during pre-application consultation to tailor RCC 319 to the operation while still ensuring compliance with § 450.145. The FAA will review the documents tailored to vehicle programs and mission-specific applications as unique means of compliance for a given license.

Blue Origin, CSF, and Virgin Galactic expressed concern that a vehicle that did not require an FSS under parts 431 or 435 might require one under part 450. The FAA disagrees. This rule maintains the level of safety required under parts 415, 417, 431, and 435 for FSS. Furthermore, as discussed in the High Consequence Event Protection section of this preamble, the ACTA study results indicate that no changes would be required under the final rule regarding the need for an FSS for any currently licensed launch vehicle launched from a Federal or commercial launch or reentry site. Therefore, the FAA does not expect to require an FSS under part 450 for any launch vehicle that would not have been required to have an FSS under parts 431 and 435.

CSF commented that the NPRM's proposed structure for requiring flight abort was overly prescriptive and would not give an operator flexibility to define the type of FSS to implement. CSF recommended requiring operators to make a safety case and moving CE_C and the reliability requirements for FSS of the NPRM to an AC.

The FAA disagrees that a safety case should take the place of discrete CE_C thresholds and the requirements for FSS in §§ 450.143 and 450.145. Although a safety case is a potential approach to applying for an ELOS determination for many of the regulatory requirements, the FAA does not believe that requiring a safety case, by itself, provides sufficient regulatory clarity as to what is expected of a launch or reentry operator to obtain and maintain a license.

Blue Origin commented that the means of compliance for FSS requirements in the NPRM was unclear, particularly for systems not on the launch vehicle such as tracking systems, ground systems, and flight abort crew. As examples, Blue Origin mentioned RCC 324 [162] and EWR 127–1 [163] for tracking systems, AFSPCI 91–701 [164] for ground systems, and AF 13–602 [165] for flight abort crew.

As discussed above, § 450.145(b) has been amended to address more clearly the part of the FSS onboard the vehicle and the part not onboard the vehicle, such as ground-based and space-based systems. In addition, this preamble addresses means of compliance for FSS requirements specifically, as well as means of compliance used to meet the requirements of part 450 more generally. As discussed previously, an untailored RCC 319–19 is currently the only means of compliance the FAA has reviewed and accepted to meet the § 450.145 FSS requirements; however, the FAA anticipates operators will provide unique tailored versions of RCC 319–19 to the FAA for acceptance under part 450. In addition, RCC 324 is an acceptable means of compliance for the airborne tracking sources such as C-Band transponders used with ground based command systems and for GPS receivers and inertial measurement units used as airborne tracking data sources. EWR 127–1 is not a current means of compliance for tracking systems because it is out of date. AFSPCI 91–701 is an acceptable means of compliance for FSS-related ground systems. Lastly, AFI 13–602 is an acceptable means of compliance for flight abort crew.

[161] In the final rule, the definition of FSS is ''a system used to implement flight abort. A flight safety system includes any flight safety system located onboard a launch or reentry vehicle; any ground based command control system; any support system, including telemetry subsystems and tracking subsystems, necessary to support a flight abort decision; and the functions of any personnel who operate the flight safety system hardware or software.'' In the NRPM, the definition also included that a human can be a part of an FSS. The FAA removed this sentence from the definition because ''the functions of any personnel who operate the flight safety system'' covers this circumstance.

[162] RCC 324–01 Global Positioning and Inertial Measurements Range Safety Tracking Systems' Commonality Standard.

[163] Eastern and Western Range (EWR) 127–1 Range Safety Requirements.

[164] AFSPCI 91–701, Launch and Range Safety Program Policy and Requirements.

[165] AFI 13–602 Ready Spacecrew Program Training.

Blue Origin noted that proposed § 450.143 appeared to be appropriately performance-based and applicable to all safety-critical systems, including software. Except for § 450.108(b)(1) FSS and software, the FAA agrees with Blue Origin that § 450.143 is appropriately performance-based and applicable to all safety-critical systems. The requirements in § 450.143 are not sufficient for § 450.108(b)(1) FSS because those systems require a higher reliability due to the potential for high consequence events, as measured by CE_C. As discussed earlier, the unique hazards due to software have a separate set of requirements in § 450.141. Otherwise, § 450.143 is sufficient for safety-critical systems and FSS that do not fall under § 450.145 because it includes performance standards for design, testing, and lifecycle management. Note that § 450.143 covers a § 450.108(b)(2) FSS that an operator uses to comply with the high consequence protection requirements of § 450.101(c), as well as an FSS that an operator uses when it chooses flight abort as a hazard control strategy under § 450.107, notwithstanding § 450.101(c). The requirements are the same for either FSS because, although the potential for a high consequence event is less of a concern in the latter case, each FSS is critical to meeting the collective, individual, aircraft, and critical asset risk criteria in § 450.101(a) and (b).

Blue Origin sought clarification as to whether an operator would need to comply with the software requirements of RCC 319 under the requirements proposed for § 450.145, in addition to the software requirements under § 450.141. An operator is not required to comply with the software requirements of RCC 319 under the requirements for § 450.145. Section 450.141 applies to any software or data that implements a capability that, by intended operation, unintended operation, or non-operation, can present a hazard to the public. Section 450.141 applies to FSS under either § 450.108(b)(1) or (b)(2). An operator is not required to meet RCC 319 in order to satisfy § 450.141, but RCC 319 is an acceptable means of demonstrating compliance with § 450.141.

Blue Origin and CSF commented that the NPRM's assertion that to get a 0.999 design reliability at 95 percent confidence by testing at predicted environment levels, an operator would have to test 2,995 units was incorrect because it did not take into account the dual redundant string architecture traditionally implemented for an FSS. The FAA concurs that its statement in the NPRM was an oversimplification that did not describe typical FSS component testing adequately. FSS testing generally consists of testing a certain number of units of an individual component to determine its reliability and confidence level, and that testing is part of determining the overall FSS system reliability. The FAA maintains that, for most operators, testing a few units at greater than expected operating environments is significantly less burdensome than testing many units at expected operating environments. Operating environments include shock, vibration, thermal cycle, acceleration, humidity, and thermal vacuum, or other environments relevant to system or material degradation. The opportunity for operators to submit new means of compliance to be accepted by the Administrator prior to application submission will allow applicants to propose their own means of compliance if they believe that another method of FSS design reliability, testing, and analysis is less burdensome than a means of compliance currently accepted by the FAA.

Microcosm asked if all orbital operators launching from the United States would be required to have a 0.999 design reliability FSS in accordance with proposed § 450.145. The FAA does not expect that all orbital operators launching from the U.S. will have operations with a potential consequence of a reasonably foreseeable failure mode in any significant period of flight that is greater than 1×10^{-2} CEC in uncontrolled areas. The FAA notes that, as described in reference to the high consequence event protection requirements of § 450.101(c), operators will be required to have an FSS if the consequence of any reasonably foreseeable failure mode in any significant period of flight is greater than 1×10^{-3} CE_C in uncontrolled areas, and, as proposed, that FSS will need to have the high design reliability of 0.999 at 95 percent confidence if the consequence of any reasonably foreseeable failure mode in any significant period of flight is greater than 1×10^{-2} CE_C in uncontrolled areas. However, the FAA has removed the additional requirements proposed in § 450.145(a)(2) in the final rule if the consequence of any reasonably foreseeable failure mode is between 1×10^{-2} and 1×10^{-3} CE_C, and in that scenario will only require an operator to use an FSS that complies with § 450.143.

SpaceX commented that RCC 319, section 1.10, allowed previously approved components and systems to be grandfathered such that they not be required to meet subsequent versions of RCC 319 unless certain criteria apply. SpaceX suggested that this approach be taken by the FAA in accepting previously tailored documents. SpaceX further recommended allowing such grandfathered acceptance of different standards such as AFSPCMAN 91–710.

The FAA's current practice is to accept FSS that have been approved under a standard such as AFSPCMAN 91–710 and RCC 319 even after updated versions of those standards are released. Licensing under part 450 should be consistent with that practice; a licensee should be able to renew its license without changes to its FSS simply because a standard that was used as a means of compliance has evolved with time. There would be exceptions, however, if a significant flaw was discovered in the earlier version of the standard.

SpaceX also commented on proposed § 450.145(d)(3), which stated that an applicant must submit any analyses and detailed analysis reports of all FSS subsystems necessary to demonstrate the reliability and confidence levels required by proposed § 450.145. SpaceX pointed out that while other government requirements, such as RCC 319, provide guidance on what analyses and reports are necessary, the proposed rule was unclear as to what specific analyses and reports are necessary.

As noted earlier, RCC 319 is an accepted means of compliance for § 450.145. An FSS design, testing, and analysis process that complies with the analysis requirements for RCC 319, or other accepted means of compliance, will satisfy the FSS analysis requirements of § 450.145.

Rocket Lab requested clarification as to whether the FSS design reliability is for hardware components only, and how to apply reliability requirements to safety systems that include software. The FAA notes that design reliability is for hardware only. The computing system safety requirements in § 450.141 do not provide an estimated reliability, but instead establish process controls that prevent or mitigate computing system faults.

The International Space Safety Foundation commented that FSS is the only system of a launcher for which the operational experience did not provide reliability significant data, because the system was ready but rarely operated. The FAA concurs with the comment that there is a lack of operational experience with FSS as far as terminating vehicles. However, operational parameters are captured throughout flights, whether the result is termination or not, and this data verifies many of the expected operating modes.

Also, reliability is gained from design and thorough test programs, as well as review of post-flight data.

The International Space Safety Foundation also commented that to base the approval of a safety-critical system on reliability predictions was not advisable considering the key role played by software, which cannot be taken into account in the reliability prediction. The International Space Safety Foundation recommended that the FAA should instead define fault tolerance requirements for the FSS, and specific software and computing system requirements in addition to generic software development processes.

The FAA disagrees, noting that FSS reliability is also based on design architecture, component selection, and testing that accounts for fault tolerance and the overall system. Recognizing that there are some difficulties in establishing reliability standards below a design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing, the FAA removes the proposed additional requirements for § 450.108(b)(2) FSS and instead relies solely on § 450.143 for design, testing, and monitoring requirements. In addition, recognizing the importance of computing systems to system reliability and public safety, the FAA proposed, and is including in the final rule robust computing system requirements in § 450.141. Computing system requirements are further discussed in the preamble section on Computing Systems and Software.

The International Space Safety Foundation recommended that the FAA set up a multidisciplinary team of design and operation experts to draw a strategy for the definition of FSS design performance requirements, and for addressing the above issues. The FAA believes that standards for FSS should continue to evolve and that industry should be significantly involved in their development. An industry-led development of a voluntary consensus standard or standards addressing design, analysis, or testing of FSS would be particularly beneficial. These standards could become new acceptable means of compliance with FAA regulations.

aa. Hybrid Vehicles

In the NPRM, the FAA proposed one set of requirements for all vehicle types without distinction between traditional and hybrid vehicles. Hybrid vehicles are launch or reentry vehicles that have some characteristics of aircraft and other characteristics of traditional launch or reentry vehicles.

The FAA acknowledges that hybrid operations differ from traditional rocket launches. Part 450 has been revised to accommodate better all vehicle operators, including hybrid vehicle operators. The accommodations include more performance-based requirements, alternatives to flight abort, FSA requirements based on demonstrated reliability, use of equivalent level of safety, and allowing application process alternatives as agreed to by the Administrator. The regulations allow currently licensed hybrid vehicle operators to continue to use a flight hazard analysis as a hazard control strategy. However, one or more hazard control strategies may be required to meet the safety criteria in § 450.101.

The FAA received numerous comments from industry regarding safety requirements for hybrid vehicles, hybrid configurations, component systems, and related operations. The FAA addresses the hybrid vehicle comments that would be applicable to other operators in the applicable topic area sections of this preamble. This section of the preamble addresses the comments that are specific to hybrid operations, such as aircraft certification, piloted vehicles, part 91 applicability, and space support vehicles.

Two commenters stated that the applicability of hybrid systems should be clarified and consolidated in a separate section of the regulation. An individual commenter recommended that the preamble material include a discussion of how the regulations would be applied to hybrid configurations since their characteristics and operations are significantly different from the more traditional RLV or ELV vertical launch systems.

The FAA notes that the final rule provides flexible performance-based regulations that work for all vehicle types, including hybrid vehicles and other innovative architectures. Like all operators, an operator of a hybrid launch or reentry vehicle must choose one or more hazard control strategies for each phase of flight in accordance with § 450.107. The FAA anticipates that hybrid vehicle operators will elect to use a flight hazard analysis as their hazard control strategy for at least some phases of flight because the flight hazard analysis is most similar to the existing system safety process in part 431.

An individual commenter stated that for hybrid vehicles, flying qualities should be identified as safety critical and as a safety element eligible for a safety element approval.

The FAA will work with operators during pre-application consultation and throughout the application review to understand a specific operation to determine what systems are safety critical as defined in § 401.7. All launch vehicles, reentry vehicles, safety systems, processes, services, or personnel are eligible for safety element approvals. The FAA will consider safety element approvals on a case-by-case basis for hybrid vehicles. This concept is discussed in the Safety Element Approval section of the preamble.

An individual commenter recommended that the FAA consider other demonstrated measures of reliability for carrier aircraft to estimate the public risk, such as ''attributed reliability'' and ''validated reliability.''

In the final rule, the FAA uses the term ''demonstrated reliability'' in §§ 450.101(c)(3) and 450.113(b). The use of this phrase in § 450.101(c)(3) allows an operator to protect against a high consequence event in uncontrolled areas for each phase of flight by establishing the launch or reentry vehicle has sufficient demonstrated reliability as agreed to by the Administrator based on CE_C criteria during that phase of flight. The use of this phrase in § 450.113(b) provides an exception for an operator from performing and documenting an FSA for a phase of flight, if agreed to by the Administrator, based on demonstrated reliability. These requirements are discussed in more detail in the High Consequence Event Protection and FSA preamble sections, respectively.

As discussed in the Conditional Expected Casualties section of this preamble and in the NPRM, demonstrated reliability refers to statistically valid probability of failure estimates based on the outcomes of all previous flights of the vehicle or stage in accordance with § 450.131, which is discussed later in the preamble. The draft High Fidelity FSA Methods AC,[166] published with the NPRM, described acceptable methods, including Bayesian and binomial methods, to calculate demonstrated reliability and demonstrate compliance with § 450.131. As discussed in the draft AC, the prior estimate for the probability of failure during a captive carry phase of flight could be based on a different flight history database [167] compared to traditional ELVs. For example, the prior estimate for the probability of failure during a captive carry phase of flight could be based on the flight history of aircraft that also used certain proven or

[166] *See* FAA–2019–0229–0019.

[167] More specifically, a different set of outcomes of all previous flights of vehicles developed and launched or reentered in similar circumstances.

industry standard design, manufacturing, or quality methods. Similarly, if a carrier vehicle were based on or modified from a type certificated commercial aircraft or used certified aircraft components, then the carrier vehicle could be considered a derived vehicle.[168] In this example, the certification results and operational history for the unmodified components of the aircraft would be accounted for in the calculation of the demonstrated reliability. Under a performance-based regulation, an applicant is free to propose a unique means of compliance with other methods to calculate demonstrated reliability. The FAA will consider other methods to calculate demonstrated reliability for hybrid vehicles such as binomial methods consistent with Appendix A to part 417 under A417.25(b)(5), and other methods used in the past for launch and reentry vehicles.

The FAA notes that other vehicle characteristics, such as flying qualities, do not lend themselves to analysis with statistical reliability measures. For example, acceptable flying qualities in one portion of the envelope do not necessarily predict good flying qualities throughout the full operational envelope, and small aerodynamic modifications or changes to the flight control system can lead to disproportionally large and potentially hazardous changes in flying qualities. In these cases, the FAA would consider flight test results using proven flight test techniques and data analysis methods as validated reliability.

An individual commenter urged the FAA to consider more than just the fact that a vehicle holds an airworthiness certificate as evidence of demonstrated reliability.

The FAA agrees that possession of an airworthiness certificate alone does not guarantee that a vehicle or operation will have a level of reliability sufficient to meet the part 450 public safety requirements. The FAA considers other factors to determine reliability. The FAA will consider the aircraft's original certification, its current certification, and any modifications introduced through issuance of supplemental type certificates. For example, a transport category aircraft that has held a standard airworthiness certificate and then been recertified to a restricted or experimental category. Any modifications to the aircraft design certification may affect the aircraft's reliability for the purposes of part 450, and the FAA therefore will take these modifications into consideration. An understanding of an aircraft's past and current operating environments and its maintenance history are also relevant to the current reliability estimate.

In addition, the FAA may consider other factors outside of certification, such as a rigorous flight test program. Some launch operators have or are developing new, purpose-built launch vehicles that may serve as a component of a hybrid launch or may be designed as rocket-powered aircraft and transitioned to licensed launch operations following flight testing. These operators may hold experimental airworthiness certificates for testing design concepts and aircraft operating techniques. Experimental airworthiness certificates may also be offered as part of a hybrid operator's application to establish the vehicle's demonstrated reliability. The FAA's Office of Commercial Space Transportation will continue to coordinate with the FAA's Aviation Safety organization on issuance of an experimental airworthiness certificate and the vehicle's developmental program to understand its demonstrated reliability.

The FAA will also consider each crewmember's level of pilot certification and flight experience, as well as the recency of that experience as evidence of demonstrated reliability of the launch or reentry system.[169] While part 460 requires flight crew to hold at least a private pilot certificate with an instrument rating, operators using flight crew with higher levels of certification, operationally related flight experience, and recent flight experience and training can demonstrate higher reliability. For example, a crewmember holding commercial and airline transport pilot certificates have more flight experience and have been tested to a higher level of proficiency than a crewmember who holds a private pilot certificate. In addition, crewmembers with operationally related flight experience will have an understanding of the decision-making required for high-altitude flight and airspeed regimes, and the recent flight experience and training of all crewmembers is recognized as foundational to ensuring a safe operating environment of an aircraft or launch vehicle.

An individual commenter stated that the phase of a hybrid vehicle operation in which the carrier vehicle is alone would be required to take into account any potential aggressive maneuvers the vehicle may have to make to clear a just-released rocket. The commenter further stated that a civil airworthiness certificate may not be adequate to cover the risks posed to the public by these unusual maneuvers.

The FAA agrees that the entirety of a launch or reentry operation must be analyzed for hybrid operations. The FAA notes that once a rocket is released, the carrier vehicle remains in the launch phase until all components of the launch system have impacted or landed on the earth and been rendered safe. Therefore, any maneuvers the carrier vehicle makes after a rocket is released but before both components have impacted or landed and been returned to a safe condition will occur under the license and be assessed consistent with the requirements of part 450.

Virgin Galactic expressed concerns that rather than streamlining the requirements to create performance-based standards, the FAA is combining its requirements for ELVs and hybrid RLVs so that each type of operator might be subject to inappropriate or ambiguous requirements. Virgin Galactic commented that it appreciated the flexibility that some of the new regulations would provide but noted that others seem too vague.

The FAA finds the final rule provides sufficient flexibility for hybrid vehicles. The performance-based regulations in the final rule allow operators like Virgin Galactic to propose an alternate approach by demonstrating an equivalent level of safety or use a unique means of compliance. To retain the maximum flexibility to adjust to dynamic industry changes, the FAA will continue to offer operators the choice to request ELOS determinations. In addition, 51 U.S.C. 50905(b)(3) allows the Secretary to waive a requirement in the public interest and will not jeopardize public health and safety, safety of property, and national security and foreign policy interests of the United States. Rather than explicitly

[168] A derived vehicle is a term used when analyzing a new variant of a known rocket. A derived vehicle should be alike in substance or essentials considering the following factors that can influence the probability of failure: (1) The development and integration processes of the vehicle, including the extent of testing; (2) the design and manufacture of safety-critical systems, including but not limited to the structure (including the payload faring), propulsion, guidance, control, and navigation; (3) all aspects of the environment experienced by the vehicles, stages, and components that can affect performance and reliability, including but not limited to aerodynamic, thermal, acoustic, vibration, and inertial environments; (4) vehicle performance in terms of payload capability, maximum dynamic pressure, and maximum velocity.

[169] For FSA purposes, the vehicle failure probability accounts for any failure of the launch or reentry system because of the way failure is defined in § 450.131(b). In the context of FSA, any failure of the launch or reentry system, including pilot error, that produced vehicle failure as defined in § 450.131(b) must be accounted for to establish the demonstrated reliability. Therefore, the FAA would consider the pilot experience and training in making a demonstrated reliability determination.

reference hybrid vehicles, the final rule provides the flexibilities to all operators, including operators of hybrid vehicles and other innovative concepts.

Virgin Galactic also stated that the intent of the requirement should be publicly articulated in the regulations and not reside in the preamble. The FAA notes both the preamble and the regulations are publicly available. The intent behind the regulations correctly resides in the preamble because the regulations contain only the regulatory requirements by which regulated entities are bound. The preamble provides further explanation as to why the FAA has elected to adopt the regulatory requirements in order to provide transparency and further elaborate on the agency's intent.

An individual commenter stated that hybrid configurations, carrier aircraft flying alone, and reentry vehicles using aerodynamic controls should follow controller instructions and abide by the general operating and flight rules of aviation found in 14 CFR part 91. The individual commented that hybrid launch vehicles with pilot-in-the-loop control systems spend much more time than RLV and ELV systems in restricted airspace and overflying populated areas and that this requires hybrid configurations to have the capability to operate safely in a controlled airspace environment like other aircraft.

The FAA agrees and notes that applicants may elect to mitigate hazards to the public by proposing applicable sections of part 91 to demonstrate compliance with specific requirements in part 450. However, all components of a hybrid vehicle operate solely under a license when the intent of flight is to conduct a launch or reentry.

Virgin Galactic stated that the FAA should have a narrowly tailored CE_C exemption from the flight abort requirements of proposed §§ 450.101(c) and 450.145 for piloted aircraft because the pilot would already provide an FSS with abort capability. Virgin Galactic further stated that a carrier aircraft in a hybrid system that operated safely under its experimental airworthiness certificate should not be subjected to the CE_C requirement in proposed § 450.101(c).

The FAA does not agree with Virgin Galactic's comment to include an exemption from demonstrating protection against a high consequence event for a piloted carrier vehicle because the operation of such a vehicle may result in a high consequence event. As discussed earlier in this preamble, operators must protect against a high consequence event because such an event could result in a large number of casualties. The FAA notes that the final rule allows an operator to seek an ELOS determination for § 450.101(c)(2). However, an exemption for all piloted carrier vehicles would not be appropriate for launch or reentry vehicle systems that have not yet been evaluated. Hence, an applicant can use another method of measuring the potential for a high consequence event that demonstrates an equivalent level of safety in accordance with § 450.37. Reusable vehicles and other innovative architectures may be required by § 450.101(c) to have a method to achieve flight abort reliably to mitigate flight risks and consequences fully, either in the form of a pilot that can safely abort flight using system controls or a more traditional FSS. A pilot may provide protection against a high consequence event. The FAA may consider a pilot to be an FSS performing a flight abort if the pilot can initiate and accomplish a controlled ending to vehicle flight reliably to limit or restrict the hazards to public health and safety, and the safety of property. Under the provision in § 450.101(c)(3), the flight of a carrier vehicle carrying a rocket to a drop point could be an example of sufficient protection against a high consequence event, even if the CE_C were above the 1×10^{-3} threshold, if the carrier vehicle has sufficient demonstrated reliability. Demonstrated reliability and other flexibilities are discussed more fully in the High Consequence Protection section of this preamble.

Virgin Galactic noted that a carrier aircraft operating under an airworthiness certificate should be exempt from proposed § 450.101(f), which, for any launch, reentry, or disposal, requires an operator to notify the public of any region of land, sea, or air that contains, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty. Virgin Galactic stated that the requirement was unclear because it discussed debris resulting from normal flight events. Virgin Galactic requested further clarification on the purpose of public notification if the proposed requirement was intended to address returning vehicles that remain intact and on a nominal trajectory to the intended reentry site. Virgin Galactic recommended that, if this regulation was intended to apply to jettisoning of orbital rocket stages and the return/disposal of upper stages, it should state as much.

The FAA agrees that returning vehicles on a normal trajectory do not constitute ''debris'' as the term is used in § 450.101(f). However, the FAA will not exempt all hybrid vehicle operators from the requirement in § 450.101(f) because future hybrid operators could possibly generate debris capable of causing a casualty from normal vehicle flight. If an operation has no planned impacts from debris capable of causing a casualty, then no notification will be necessary to comply with § 450.101(f).

Several commenters, including ALPA, Starfighters, and Virgin Galactic, submitted comments regarding the applicability of FSA requirements for hybrid vehicles under proposed § 450.113(a)(5). Virgin Galactic noted that, for the captive carry phase of a hybrid vehicle mission, the FAA should exempt operators from performing an FSA for a piloted aircraft that operated in accordance with aviation regulations. Virgin Galactic stated the FAA should include such an exemption because the pilot would already provide abort capability as an FSS. Starfighters commented that an FSA should be required only for the air-release launch phase of a hybrid vehicle mission, not the earlier captive-carry phase, which might be many miles away from the actual release point. However, ALPA stated that the FAA should require an FSA for all phases of flight until sufficient quantitative data for hybrid commercial space vehicles becomes available for analysis and to conduct a regulatory process to standardize airworthiness requirements for hybrid commercial space vehicles. An individual commenter noted airworthiness certificates issued by the FAA are part of a safety analysis but are not conclusive evidence of demonstrated reliability for the purpose of proposed § 450.113(a)(5). ALPA noted that flight test results using proven flight test techniques and data analysis methods should serve to validate reliability of hybrid vehicles' carrier aircraft under proposed § 450.113(a)(5), without requiring documentation and statistical analysis of all previous flights.

In the final rule, the FAA is not providing a blanket exemption to the FSA requirements for hybrid operations. The final rule removes § 450.113(a)(5) but maintains the flexibility proposed in the NPRM to enable an operator of a hybrid vehicle with a high level of demonstrated reliability to be exempt from performing some FSAs for some phases of flight without seeking a waiver. The FAA will work with hybrid vehicle applicants during pre-application consultation on how to comply with FSA, CE_C, and FSS requirements utilizing the flexibilities that may be applicable depending on the applicant's vehicle and concept of

operations. For example, the FAA might determine the quantitative FSA requirements for those portions of an operation for which the vehicle operates similarly to a civil aviation aircraft governed by civil aviation regulations are unnecessary because the vehicle has demonstrated reliability for operations using a certificated aircraft or a valid airworthiness certificate with an acceptable flight test history.

The FAA expands the flexibility for hybrid vehicles in proposed § 450.113(a)(5) to all vehicle operators in the final rule in § 450.113, as discussed in more detail in the preamble section for FSA Requirements Scope and Applicability. The FAA finds this flexibility should be available to all operators if agreed to by the Administrator based on demonstrated reliability. This wider availability will provide a common regulatory construct across different operators to identify the phases of flight for which FSA must be performed. Based on current licensed operations, the FAA anticipates that initially only carrier vehicles that have an airworthiness certificate and extensive flight history would be able to meet the demonstrated reliability standard. Aside from some carrier aircraft used as a component of a launch vehicle, no existing launch vehicle has enough history to ensure sufficient protection against a high consequence event based on demonstrated reliability in accordance with § 450.101(c) or enough empirical evidence to demonstrate compliance with the public risk criteria in § 450.101(a) or (b).[170]

Virgin Galactic asked about the applicability of the rule for hybrid vehicles, including certain operational exemptions. Virgin Galactic commented that the safety-critical system requirements in § 450.143 should not apply to hybrid carrier aircraft that operate under an FAA-issued license and hold an airworthiness certificate issued by the FAA. Virgin Galactic noted the requirements of this section were akin to aircraft certification, which are spelled out in the applicable parts of 14 CFR Chapter 1 that have been developed over decades as the aviation industry matured. Virgin Galactic stated that the commercial space industry is not at the state of maturity as commercial aviation, and applying these similar ''certification'' requirements is contrary to the requirement in the Commercial Space Launch Act to promote the commercial space launch industry and only regulate to the extent necessary.

The FAA does not agree that carrier vehicles operating under an FAA-issued license with an airworthiness certificate issued by the FAA should be exempt from the safety-critical system requirements in § 450.143. While airworthiness certification likely indicates increased reliability because a certificated aircraft has satisfied many separate FAA regulations, the satisfaction of those regulations does not alone demonstrate that the carrier vehicle will meet the applicable requirements under chapter III. However, an applicant may make a safety case supporting an equivalent level of safety for a component of a launch system if it holds a valid airworthiness certificate with an acceptable flight test history. In the final rule, § 450.143 includes the requirements for all safety-critical system components and eliminates the ambiguity that existed in the part 431 regulations regarding required testing of safety-critical systems. Section 450.143(e)(3) also requires a summary of the analysis detailing how applicants arrived at the predicted operating environment and duration for all qualification and acceptance testing. Such a summary is current practice, and § 450.143(e) makes this requirement explicit for all vehicles. In response to Virgin Galactic's comments regarding the relative maturity of commercial aviation versus the commercial space industry and the appropriate approach to regulating the commercial space industry, the FAA believes that the performance-based requirements of the final rule fulfill statutory mandates and are appropriate for the commercial space industry's capabilities now and as they will evolve in the future.

An individual commenter stated that the carrier aircraft portion of their launch system would also be capable of conducting operations as a space support vehicle (SSV). The commenter sought clarification as to whether part 450 would require adjustment to be consistent with new SSV operations. SSVs and SSV flight are defined in section 50902 of title 51. Requirements to conduct the flight of a space support vehicle would be promulgated pursuant to Section 44737, and are beyond the scope of this rulemaking.

bb. Agreements and Airspace (§ 450.147)

In the NPRM, the FAA proposed to streamline the existing requirements for agreements by removing specific requirements for a variety of agreements and procedures and allowing an operator to determine what agreements would be needed for its particular operation. As proposed in § 450.147, a vehicle operator would be required to have written agreements with any entity that provides a service or use of property to meet a requirement in part 450. The regulation identified various entities for which agreements may be required including a Federal launch range operator, a licensed launch or reentry site operator, any party that provides access to or use of property and services required to support a safe launch or reentry under part 450, the U.S. Coast Guard, and the FAA.

In the final rule, the FAA adopts the proposal with one minor change. The FAA has replaced the words ''Federal launch range'' in § 450.147(a)(1) with ''Federal launch or reentry site'' to encompass all Federal sites used for licensed activities.

AAAE asked whether proposed § 450.147(a)(1) would require agreements with alternative or contingent landing sites and requested that the FAA expressly require such agreements to ensure that they are included in the licensing and launch preparation process. In § 450.147(a)(1), the FAA requires agreements with any entity that provides access to property required to support a safe launch or reentry. Contingency abort locations are taken into consideration by the applicant as part of its public safety analyses and by the FAA in its environmental review. Because contingency abort locations necessarily involve planned access to property, the FAA will not revise the regulation to expressly require agreements with alternative or contingent landing sites. The language in § 450.147(a)(1) is sufficient to ensure agreements are in place for all planned locations. The FAA will not require such agreements for emergency landing sites or other locations that are being considered, but have not been finalized by the operator.[171]

[170] The L–1011 carrier vehicle used for Pegasus launches is an example of a carrier aircraft with enough empirical evidence to demonstrate compliance with the public risk criteria in § 450.101(a) or (b). Using flight history to demonstrate compliance with the risk criteria in § 450.101(a) and (b) is relatively simple, given a statistically significant number of flights relative to the expected casualty limit of 1×10^{-4}. As discussed elsewhere in the preamble, the FAA notes that the operator must also perform a system safety analysis to demonstrate that any modifications made to the carrier vehicle introduce only hazards to the public that are extremely remote.

[171] The FAA notes that it has distinguished emergency abort landing sites from planned contingency abort sites in other rulemakings. For example, in the Commercial Space Transportation Reusable Launch Vehicle and Reentry Licensing Regulations final rule, § 431.23 required an operator to identify contingency abort sites in its application. The FAA stated that contingency abort sites are pre-planned, and their potential use may be identified as part of an application in order to meet mission

Section 450.147(a)(3) requires operators to have written agreements with FAA's Air Traffic Organization (ATO) or foreign air navigation service providers (ANSP) to establish procedures for the issuance of a Notices to Airmen (NOTAM) prior to a launch or reentry.

AOPA recommended that the FAA establish procedures for the issuance of a Notices to Airmen (NOTAM) at least 72 hours prior to a launch or reentry to forewarn the public about activation of different airspace.

It would not be appropriate within this commercial space rulemaking to impose a requirement on the FAA ATO or a foreign ANSP to issue NOTAMs within a particular time frame. Each ANSP is responsible for the safe and efficient use of its airspace and can be expected to provide notification consistent with its obligations. As such, notification requirements necessary to protect the public, including any minimum times for notification, should be determined as part of the agreement development process with the FAA ATO or foreign ANSP.

Section 450.147(a)(4) requires an operator to enter into such agreements with emergency response providers, including local government authorities, as necessary to satisfy the requirements of § 450.173 (Mishap plan—reporting, response, and investigation requirements).

SpaceX recommended that proposed § 450.147(a)(4) exclude government installations where responsibilities and mutual aid protocol rendered separate agreements with local authorities unnecessary. SpaceX believes this addition would manage expectations where multiple Federal entities may have overlapping jurisdiction for addressing mishap response.

Because § 450.173(d)(5) requires an operator to implement agreements with government authorities and emergency responders ''as necessary'' to satisfy the requirements of § 450.173, no change to the proposed language in § 450.147(a)(4) is required. An operator that is launching from a Federal launch site is not required to execute agreements with local authorities if the Federal site already has the necessary coordination in place to satisfy the requirements in § 450.173.

Section 450.147(b) requires that agreements clearly delineate the roles and responsibilities of each party to support the safe launch or reentry under part 450. SpaceX suggested adding language to require parties to delineate roles and responsibilities ''within their jurisdiction.'' Indeed, an entity may only enter into an agreement to the extent they are authorized, but the FAA disagrees that this language is needed in the regulation.

Section 450.147(d) requires operators to describe each agreement submitted in accordance with the section.

SpaceX asked the FAA to clarify in a guidance document the intent of proposed § 450.147(d) and allow operators to provide other acceptable documentation (*e.g.,* business processes like the Universal Documentation System) to avoid literal interpretations of requirements. To comply with this requirement, the operator will enumerate those services that the site operator is providing through various agreements. The FAA may request a specific agreement that the site operator has established to provide such a service. As long as each agreement required by this section meets the criteria set forth in § 450.147, the operator may choose the format of the agreement. Therefore, the FAA adopts the proposed rule without change.

Virgin Galactic asked whether an agreement would be required with local authorities to ensure that the area is cleared of the public and critical assets if an operator cannot meet conditional risk factor criteria for an uncontrollable area of land. The FAA notes that conditional risk does not trigger the need for an agreement with a local authority. Instead, it is related to the need for an FSS. However, such an agreement might be a means of mitigating conditional risk, potentially to a degree at which the operator does not need to employ an FSS.

A number of commenters expressed concern that the NPRM did not require that airspace efficiency be taken into consideration as part of a launch or reentry operation. AAAE, A4A, ACI, ALPA, AOPA, CAA, NATCA, RAA, and Southwest Airlines recommended the FAA incorporate airspace efficiency consideration into the licensing process to minimize negative operational and financial impacts for airlines, passengers, cargo shippers, and the public that will result from this rulemaking. A4A, AAAE, and Southwest Airlines advocated increased transparency and collaboration with airspace stakeholders in developing agreements pursuant to proposed § 450.147. A4A, AAAE, ACI, ALPA, AOPA, CAA, NATCA, and RAA recommended the FAA ensure the safety requirements for commercial space operations, particularly those addressing risks to other aviation users, are commensurate with the expectations of the flying public. AOPA recommended the FAA prioritize funding and implementation of the Aeronautical Information Management Modernization program, which would provide real-time airspace information. A4A, AAAE, ACI, and AOPA recommended the FAA incorporate and implement various recommendations from the Airspace Access Priorities ARC and Spaceport Categorization ARC.

The FAA acknowledges the commenters' concerns regarding airspace efficiency, but these issues are not within the scope of this rulemaking. Operational oversight and management of airspace impacts are managed at the FAA Air Traffic Control System Command Center. As noted in the Flight Hazard Area Analysis section of this preamble, FAA is working to address this issue through the Airspace Access ARC and other initiatives.

cc. Safety-Critical Personnel Qualifications (§ 450.149)

In the NPRM, the FAA proposed to remove the certification requirements found in §§ 417.105, 417.311, and 415.113 and replace them with performance-based requirements in proposed § 450.149 (Safety-Critical Personnel Qualifications). Section 450.149(a) would require an operator to ensure safety-critical personnel are trained, qualified, and capable of performing their safety-critical tasks, and that their training is current. Under proposed § 450.149, an applicant would be required to identify in the application all safety-critical tasks and internal requirements or standards for personnel to meet prior to performing the identified tasks. The application would be required to identify internal training and currency requirements, completion standards, or any other means of demonstrating compliance with the requirements of proposed § 450.149. The applicant would also be required to describe the process for tracking training currency.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended that the FAA require that safety-critical personnel comply with the Federal Drug-Free Workplace requirements set forth in 14 CFR 120. These commenters noted that the Federal Drug-Free Workplace requirements apply to government contractors, but commercial operators are only subject to company policy, which may not address the use of drugs and alcohol. The FAA did not propose to require drug and alcohol testing and finds that such a requirement would exceed the scope of

risk criteria and, therefore, are separate and distinct from emergency abort landing situations that may potentially be anywhere. 65 FR 56617, 56635 (November 20, 2000).

this rulemaking. The FAA may consider proposing such action in a future rulemaking.

The FAA received a comment from Blue Origin supporting the changes to the safety-critical personnel qualifications requirements. In the final rule, the FAA adopts § 450.149 as proposed.

dd. Work Shift and Rest Requirements (§ 450.151)

In the NPRM, the FAA proposed to combine the rest requirements of §§ 417.113(f) and 431.43(c)(4) into § 450.151 (Work Shift and Rest Requirements), which would require an applicant to document and implement rest requirements that ensure safety-critical personnel are physically and mentally capable of performing assigned tasks. These requirements would apply to operations of all launch and reentry vehicles and would allow operators flexibility to employ rest rules that fit their particular operations. Section 450.151(b)(1) would require an operator's rest rules to include the duration of each work shift and the process for extending this shift, including the maximum allowable length of any extension. An operator's rest rules would be required to include the number of consecutive work shift days allowed before rest is required. Section 450.151(b)(3) would also require an operator's rest rules to include the minimum rest period required between each work shift, including the period of rest required immediately before the flight countdown work shift. Applicants would be required to submit their rest rules during the license application. In the final rule, the FAA adopts § 450.151 as proposed.

The FAA received seven comments on its proposed work shift and rest requirements. Blue Origin, Rocket Lab, Virgin Galactic, and an individual commenter agreed with FAA's proposed requirements permitting greater flexibility in ensuring sufficient rest for safety-critical personnel. Rocket Lab commented that the proposed approach would enable operators to develop work shift and rest requirements that are appropriate for the individual operating conditions, environment, and mitigations that exist.

Virgin Galactic requested the FAA provide further guidance of what would satisfy proposed § 450.151 beyond the example of § 431.43(c)(4). Section 431.43(c)(4) or the crew rest requirements of AFSPCMAN 91–710 are two possible, but not the only, means of compliance with § 450.151.

ALPA opposed the performance-based approach to work shift and rest requirements, stating that prescriptive duty limits were necessary to reduce the likelihood of human error related to fatigue. ALPA indicated the proposed rule made it possible for a commercial space operator ''to set unrealistic crew rest requirements for cost management (doing more with less) instead of safety.'' ALPA recommended the FAA adopt the rest rules contained in § 437.51.

The FAA elected a performance-based requirement over a prescriptive one akin to § 437.51 in order to allow operators to develop requirements that are suited to their particular operations. In addition, prescriptive requirements fail to account for the various factors that can affect crew rest, such as the time of day of an operation, length of pre-flight operations, and travel to and from the launch or reentry site. The performance-based requirement set forth in § 450.151 allows operators to take into account such factors affecting crew rest and adopt mitigations and procedures unique to each launch operation. The FAA also disagrees that § 450.151 will enable operators to set unrealistic crew rest requirements in the interest of cutting costs. Although operators can develop rest rules that fit their operations, operators must demonstrate in their application that their rest rules ensure safety-critical personnel are physically and mentally capable of performing assigned tasks. The FAA will evaluate the rest rules during review of the license application, and, if accepted, they will become part of the license. The FAA finds that no change to the proposed regulation is warranted.

ALPA and Blue Origin stated the commercial space operator should be responsible for monitoring compliance with work shift and rest requirements. Blue Origin noted the companies should be responsible for monitoring compliance after the FAA accepts an operator's rules through the application and approval process. Rocket Lab commented that a specific requirement for operators to monitor compliance with work shift and rest requirements was unnecessary as the regulation explicitly required that the rest rules implemented ensure safety-critical personnel are physically and mentally capable of performing all assigned tasks.

Operators are expected to monitor compliance with their approved crew rest rules so that personnel are fit to perform safety-critical tasks and to provide records of compliance with those rules, as required by § 450.219(a), where requested by the FAA. The FAA finds that a specific requirement for operators to monitor compliance with work shift and rest requirements is unnecessary. The rest requirements in § 450.151(b) ensure safety-critical personnel are physically and mentally capable of performing all tasks. It is up to the company to monitor compliance with its work shift and rest rules to ensure personnel are mentally and physically capable of performing safety-critical tasks. An operator must comply with the rest rules accepted by the FAA as part of the license because it must comply with the representations in its application. Therefore, even absent an express requirement, an operator must monitor compliance with its rest rules in order to ensure that the objectives of § 450.151 are met and that the operator does not act contrary to its application.

Blue Origin asked the FAA to clarify the time period to which the rest rules apply in finalizing the rest requirements and the scope of license rule (§ 450.3). Blue Origin suggested the rest requirements should only apply during the period an action could present a distinct impact to safety, akin to how NASA closely monitors astronauts' rest/work periods but does not mandate crew rest requirements for aerospace employees in manufacturing plants or NASA mission control staff.

Although the FAA declines to limit the scope of § 450.151 as Blue Origin recommends, the FAA clarifies that § 450.151 is intended to ensure safety-critical personnel are prepared to perform tasks that have an inherent impact on public safety. Operators must document and implement rest rules to ensure that safety-critical personnel have received adequate rest before they perform any safety-critical task. Operators would not be able to ensure that personnel are physically and mentally prepared to perform safety-critical tasks if the rest rules set forth in § 450.151 applied only during activities that could distinctly affect safety (*i.e.,* during safety-critical tasks). For example, the rest rules apply to safety-critical tasks such as end to end testing and safety-critical hardware installation that may occur before hazardous pre-flight operations trigger the start of launch. Operators must therefore comply with § 450.151 for the duration of their license. The regulation is flexible enough that an operator can develop rules that treat different parts of launch activity differently. The FAA finds that no change to the regulation is warranted.

Blue Origin suggested removing the definition of ''vehicle safety operations personnel,'' as it has caused confusion in the industry. The FAA agrees and does not adopt the definition.

Boeing, Lockheed Martin, Northrop Grumman, and ULA asserted the

requirements proposed in § 450.151(b) reflect a relaxation of work rule standards compared to the current FAA and range policies. They further noted other DOT-regulated industries have explicit rest criteria and recommended that the FAA publish the acceptable criteria rather than having operators negotiate the hours deemed safe.

The requirements proposed in § 450.151(b) are not a relaxation of work rule standards compared to current FAA and range policies because, as previously stated, two of the ways an operator can show compliance with § 450.151 are to meet current FAA rules (§ 431.43(c)(4)) or AFSPCMAN 91–710, and the FAA retains oversight to determine that an operator's rules achieve the standard.

As previously stated, the FAA will issue an AC on a means of compliance for § 450.151. The crew rest requirements previously set forth in part 431 and the current crew rest requirements in AFSPCMAN 91–710 will satisfy § 450.151.

ee. Radio Frequency (§ 450.153)

In the NPRM, the FAA proposed that, for any radio frequency used, an operator would be required to: (1) Identify each frequency, all allowable frequency tolerances, and each frequency's intended use, operating power, and source; (2) provide for the monitoring of frequency usage and enforcement of frequency allocations; and (3) coordinate use of radio frequencies with any site operator and local and Federal authorities. Proposed § 450.153(b) contained application requirements and required an applicant to submit procedures or other means to demonstrate compliance with the radio frequency requirements.

Blue Origin, SpaceX, and Sierra Nevada commented the proposed requirements were duplicative of Federal Communications Commission (FCC) licensing requirements and, according to Blue Origin, were an unnecessary burden on operators. Blue Origin explained that operators coordinate frequency management through the FCC licensing process, which is robust in its technical review of transmitter capabilities. Blue Origin also noted FCC licenses are public information that the FAA can verify. Sierra Nevada suggested the regulation should either require only that the applicant demonstrate it has coordinated with the FCC or be omitted altogether.

The FAA agrees that the proposed requirements in § 450.153(a)(1) and (a)(2) are duplicative of FCC requirements for radiating systems and overly burdensome. The FCC requires in Section 308(b) of the Communications Act of 1934, as amended, all the items in proposed § 450.153(a)(1) and (a)(2) as part of an FCC license for radiating systems that an operator must obtain to operate radiating equipment as part of a launch. The purpose of radio frequency management, as stated in the NPRM,[172] is to mitigate hazards associated with radio frequency usage including interference that could adversely affect the FSS or any safety-critical system of a vehicle, including RLVs and reentry vehicles. The intent of proposed § 450.153 (a)(1) and (a)(2) was to ensure radio transmissions would not interfere with commanded flight termination systems and would be compatible with the receiving system on the vehicle. The FAA finds that operators can identify and mitigate hazards affecting FSS or safety-critical systems effectively without duplicating information required by the FCC. In the final rule, the FAA amends § 450.153(a) by replacing (a)(1) and (a)(2) with the performance-based objective central to § 450.153 that requires operators to ensure radio frequency interference does not adversely affect performance of any FSS or safety-critical system. Proposed § 450.153(a)(3) is re-designated as (a)(2) and continues to require operators to coordinate use of radio frequencies with any site operator and any local and Federal authorities, including any State, tribal, or territorial authorities.

Blue Origin commented that proposed § 450.153 added to the burden previously placed on operators under part 431, which ought to be included in the FAA's cost analysis. Blue Origin explained an applicant would be required to submit to FAA the substantive content of a frequency management plan and submit procedures to demonstrate compliance with that plan. Blue Origin pointed out that under part 431, the FAA did not require operators to prove they acquired FCC licenses for a mission or that they coordinated the use of radio frequencies.

As previously explained, the FAA has removed the duplicative provisions from § 450.153, which would have amounted to a greater burden on operators than has previously been required under part 431. As such, in the final rule, § 450.153 requires no more of operators than what part 431 required for analysis of hazards associated with licensed activities, creating no additional cost to operators.

[172] 84 FR 15334, footnote 98.

Blue Origin recommended proposed § 450.153 be removed since applicants were already required to address and mitigate hazards associated with frequency coordination or radiation exposure or power limits as part of their hazard analysis. Blue Origin added that, for launches at Federal launch or reentry sites, proposed § 450.153 would duplicate much of the information submitted to the Federal site, whose frequency management office typically works with range scheduling to regulate radiation and power limits to prevent exceeding radiation exposure and power limits while on the pad and harming the vehicle or payload. For operations that do not occur on Federal sites, Blue Origin indicated an operator would proceed as under the current part 431 by identifying hazards and mitigation measures required to meet the public safety limits. According to Blue Origin, operators should incorporate hazards associated with this issue in their hazard analysis, including identifying mitigation issues.

The FAA disagrees that § 450.153 is unnecessary or duplicative of hazard analysis requirements. As stated in the NPRM, the FAA has determined that the public safety risks posed by radio frequency interference warrant specific attention apart from the general requirement that operators identify and mitigate hazards associated with licensed activity. To the extent Federal launch or reentry site procedures provide for coordination of radio frequencies used, an operator may rely on those procedures to demonstrate compliance with § 450.153. The FAA does not prescribe the manner in which an operator ensures that radio frequency interference does not adversely affect a vehicle's FSS or any safety-critical system. The FAA merely requires that operators set forth in their applications a means of complying with § 450.153 so that the FAA can ensure that radio interference issues are appropriately addressed.

In an effort to streamline radio frequency requirements, SpaceX recommended the FAA revise proposed § 450.153(a)(2) to require that operators ensure frequency utilization according to frequency authorization parameters. SpaceX also recommended the FAA revise proposed § 450.153(b) to require coordination with site operators and local and Federal authorities only for launches that do not occur on a Federal launch or reentry site with existing radio frequency policies and procedures.

The FAA disagrees that any frequency authorization parameters issued by the FCC, which are geared toward managing

frequency use and operation, would be sufficient to assess hazards to public safety posed by radio frequency interference, which are properly within the FAA's purview. As previously discussed, the FAA has removed the prescriptive requirements that it deemed duplicative of FCC requirements in proposed § 450.153(a) and replaces them with a central performance-based objective. The FAA declines to accept SpaceX's suggestion to amend § 450.153(b). The coordination required by § 450.153(b) allows an operator to operate a command transmitter at a frequency and power that ensures a flight termination system signal can be successfully transmitted, and thereby prevent harmful radio interference, in the interest of public safety. The FAA declines to remove the requirement that all operators coordinate use of radio frequencies with any site operator and local and Federal authorities in order to protect the public and public property, because such coordination is necessary to prevent radio interference that could affect public safety. Users of Federal launch or reentry sites may use Federal site procedures for radio frequency to demonstrate compliance with § 450.153.

Virgin Galactic asked if an operator could contract a third party to meet the frequency management requirements.

The FAA does not prescribe the means by which an operator complies with § 450.153. An operator could therefore enter into an agreement in accordance with § 450.147 to have a third party, such as a spaceport or Federal launch or reentry site, satisfy the radio frequency management requirements contained in § 450.153.

As noted, the FAA adopts § 450.153 (Radio Frequency Management) with revisions. The FAA replaces paragraphs (a)(1) and (a)(2) with performance-based objectives central to radio frequency management. Operators will be required to ensure that radio frequency does not adversely affect the performance of FSS or safety-critical systems and to coordinate use of radio frequencies with any site operator and local and Federal authorities.

ff. Readiness and Rehearsals (§ 450.155)

In the NPRM, the FAA proposed an operator would be required to document and implement procedures to assess readiness to proceed with the flight of a launch or reentry vehicle. As part of the application requirements, proposed § 450.155(b)(2) would require an applicant to describe the criteria for establishing readiness to proceed with the flight of a launch or reentry vehicle.

Rocket Lab expressed support for the proposed requirements as reducing the risk of unintended consequences that resulted from stringent time requirements. SpaceX recommended that the FAA clarify its intent for flight commit criteria in proposed § 450.155(b)(2) to ensure that mission success is not a factor by having applicants describe the criteria ''to ensure public safety'' for establishing readiness to proceed with the flight of a launch or reentry vehicle.

The FAA agrees that a change to the proposed regulatory language would clarify the scope of the requirement. Therefore, the FAA revises § 450.155(b)(2) by adding the phrase ''so that public safety is maintained'' to the end of the paragraph. The FAA did not adopt the language recommended by SpaceX because the requirement calls for criteria that establish readiness to proceed with flight or reentry while ensuring public safety. The FAA's revision maintains the emphasis on developing criteria to determine readiness to proceed with launch or reentry, and clarifies that the operator need only identify those criteria that affect public safety.

gg. Communications (§ 450.157)

In the NPRM, the FAA proposed to preserve the substantive communications requirements from parts 417 and 431 but eliminate the requirement to implement a communications plan. Proposed § 450.157(a) would require an operator to define the authority of personnel to issue ''hold/resume,'' ''go/no go,'' and abort commands, assign communication networks so those personnel have direct access to real-time safety-critical information, ensure those personnel monitor each common intercom channel during countdown and flight, and implement a protocol for using defined radio telephone communications terminology. Proposed § 450.157(c) would also require an operator during each countdown to record all safety-critical communications network channels that are used for voice, video, or data transmissions to support safety-critical systems. This requirement is substantially the same requirement in §§ 417.111(l)(5)(vii) and 431.41. In the final rule, with the exception of proposed § 450.157(a)(3) as discussed later in this preamble section, the FAA adopts § 450.157 as proposed.

As explained in the NPRM, operators would not need to submit their communication procedures during the application process as those procedures generally are not mature at that time. The FAA will verify compliance with § 450.157 during inspections.[173] The inspections will be consistent with current practice, in which FAA inspectors often review the operator's final communications procedures. Given that operators do not need to demonstrate compliance with § 450.157 at the application stage, operators may be required to revise their communication procedures to resolve issues identified during compliance monitoring.

The FAA received three comments addressing the communications requirements proposed in § 450.157. AAAE recommended the FAA require procedures and protocols on how the operator would communicate with contingency or alternative landing sites, and emergency responders. AAAE also suggested the FAA consider providing these same stakeholders with the ability to monitor countdown and communications channels, just as operators would be required to provide the FAA with such access under proposed § 450.209.

The FAA finds no additional requirements are necessary, as the accident investigation and agreement requirements address AAAE's concerns. Operators must include emergency response procedures in their mishap plans pursuant to § 450.173, which could, in many instances include communication procedures with emergency response service providers. In addition, operators must enter into and implement any necessary agreements with local authorities and emergency response services, such as first responders. Any other stakeholder, such as a contingency abort site, may request to monitor channels as part of its agreement with the operator, but the FAA does not find it necessary for safety to mandate this type of monitoring in all situations.

Sierra Nevada commented that the requirement to monitor each common intercom channel is excessive and would decrease the safety of an operation. It noted that, for operators with multiple channels (*e.g.,* more than 10), monitoring each channel would serve to decrease the overall situational awareness of the controller. Sierra Nevada recommended the FAA revise proposed § 450.157(a)(3) to require that personnel monitor only the applicable intercom channels during countdown and flight.

The FAA agrees with Sierra Nevada's recommendation and removes § 450.157(a)(3). The persons responsible for the launch need to maintain situational awareness and have all

[173] 84 FR 15337.

safety-critical information in order to make decisions that affect public safety. In cases in which there are multiple channels, all channels do not have to be monitored at the same time. It is common practice to turn down or turn off channels in order to listen to a channel that has critical information. Each person identified in paragraph (a)(1) of this section is not required to listen actively at all times. Operator personnel other than those listed in (a)(1) may listen to channels as necessary to relay critical information to the personnel listed in (a)(1).

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended the FAA qualify the requirement to record safety-critical communications channels in § 450.157(c) as ''subject to records retention requirements of § 450.219.'' The FAA agrees that an operator must record all safety-critical channels and retain them for the time periods specified in § 450.219, but does not agree that a change to the regulatory text is necessary.

hh. Pre-Flight Procedures (§ 450.159)

In the NPRM, the FAA proposed to streamline countdown procedures and requirements. Specifically, the FAA proposed not to include in part 450 the requirements for safety directives or safety notebooks in § 431.37(a)(2) and for a countdown plan in § 417.111(l), as well as the requirement to file such plans, because there are many methods of documenting pre-flight procedures that do not involve a plan or notebook. In addition, the FAA proposed a performance-based requirement in which an operator who needs to implement pre-flight procedures would verify that all flight commit criteria are satisfied before flight and ensure the operator is capable of returning the vehicle to a safe state after a countdown abort or delay. In the final rule, the FAA adopts § 450.159 (Pre-flight Procedures) as proposed.

Virgin Galactic commented that, if the FAA knows which events must take place as a part of a countdown, it should require them in proposed § 450.159(a)(1). Virgin Galactic recommended the FAA require operators to identify the sequence of events that must take place to initiate flight in order to verify that flight commit criteria are satisfied.

Flight commit criteria involve much more than the launch sequence of events, including interdependent conditions such as meteorological conditions, lightning protection equipment measurements, and status of safety system components. Therefore, the requirements of § 450.159 cannot be satisfied by merely having operators identify the launch sequence of events. Furthermore, the FAA does not think a prescriptive requirement listing which events must take place as part of a countdown is necessary to ensure safety. Rather, this section takes a performance based approach that focuses more comprehensively on verification of flight commit criteria and the operator's ability to ensure that it can return the vehicle to a safe state after a countdown abort or delay. The FAA notes that the requirements for the flight commit criteria itself are clearly provided in § 450.165(b).

ii. Control of Hazard Areas (§ 450.161)

In the NPRM, the FAA proposed that an operator would be required to publicize, survey, and evacuate each flight hazard area before initiating flight or reentry to the extent necessary to ensure compliance with proposed § 450.101. Proposed § 450.161(a) did not change the need for surveillance relative to the current requirements in parts 417 and 431 [174] for people on land or aircraft because an operator must continue to ensure all regions where any individual member of the public would be exposed to more than 1×10^{-6} P_C (probability of casualty) are evacuated. However, the FAA proposed to revise the requirement to evacuate and monitor areas where a waterborne vessel would be exposed to greater than 1×10^{-5} P_I (probability of impact) currently required by Appendix B to part 417 under B417.5(a). The NPRM allowed an operator to include people in waterborne vessels in collective risk computations, rather than clearing a waterborne vessel from a hazard area because the vessel is exposed to 1×10^{-5} P_I. The NPRM proposal to include people on ships in the collective risk computation in § 450.101(a)(1) and (b)(1) would allow the application of risk management principles to protect people on waterborne vessels. In the final rule, the FAA adopts § 450.161 with revisions. It updates § 450.161 to be consistent with the language in flight hazard area analysis section, § 450.133, and adds an application requirement for a description of how the applicant will provide for any publication of flight hazard areas.

The FAA changes the title of this section from ''Surveillance and Publication of Hazard Areas'' to ''Control of Hazard Areas'' to describe the contents of this section fully, as the requirements cover more than surveillance and publication. The FAA also changed the proposed wording in § 450.161(a) from ''publicize, survey, and evacuate'' to ''survey, publicize, control or evacuate'' to match the language in § 450.133(a), which describes flight hazard area analysis. The term ''control'' is used to describe the overall management of hazard areas, including control of entry and exit points such as roadblocks and security checkpoints. The FAA also adds language in § 450.161(a) that references the flight hazard area requirements in § 450.133, which requires an applicant to identify the flight hazard areas it needs to control.

The FAA notes that the requirements in § 450.161 are consistent with the recommendations made by the National Academy of Sciences National Research Council.[175] An applicant could apply conservative estimates of the ship traffic and vulnerability to demonstrate acceptable public risks. However, as explained in the NPRM, the operators still have the option to use the current approach in part 417, where surveillance is required to ensure no ship is exposed to more than 1×10^{-5} P_I, because that would be sufficient to ensure compliance with § 450.101.

Boeing, Lockheed Martin, Northrop Grumman, and ULA proposed that the phrase ''unless otherwise assigned through agreement with a launch or reentry facility'' be added to proposed § 450.161(a) for clarification. Virgin Galactic also recommended that this requirement be handled through Letters of Agreement. Although the operator may contract with another party for the provision of services to meet this requirement, the licensee remains responsible for complying with the requirement. As such, the FAA does not agree that this recommended addition is necessary.

SpinLaunch commented that the goals of the NOTAM required under proposed § 450.161 can be addressed through area designations on Sectional Aeronautical Charts, controlled airspace designation, and coordination with Air Traffic Control. The FAA is responsible for the

[174] Part 417 requirements for establishing and surveying hazard areas for ELVs are found in §§ 417.205, 417.223, and part 417 appendix B. Part 431 does not set explicit requirements for surveillance but both §§ 417.107(b)(2) and 431.35(b)(1)(ii) require that an operator ensure all members of the public are cleared of all regions, whether land, sea, or air, where an individual would be exposed to more than 1×10^{-6} PC.

[175] In 2001, the National Research Council published a report on ''Streamlining Space Launch Range Safety,'' which included a recommendation that ''safety procedures based on risk avoidance should be replaced with procedures consistent with the risk management philosophy specified by EWR 127–1.'' *See* p. 44 of IBSN 0–309–51648–X available at *http://www.nap.edu/catalog/9790.html.*

management of the NAS and establishes the regulations, processes, and procedures for restricting airspace including airspace restrictions for commercial space activity. Under § 450.147, when an operator enters into a letter of agreement with the FAA, the airspace needed to accomplish the proposed operation safely is notionally identified and air traffic control coordination procedures are established accordingly. The FAA did not propose changes to airspace management regulations or processes, so SpinLaunch's comment is beyond the scope of this rulemaking.

AOPA commented that airspace hazard volumes are not communicated in a standardized manner today, nor are pilots educated on what to do with this information. AOPA further commented that a publicly accessible, authoritative source for launch information would greatly increase awareness and mitigate adverse impacts caused by short notice announcements of launches. The commenter also suggested that prospective users of the system should be part of this capability's development process.

As discussed more fully in the preamble section associated with Flight Hazard Area Analysis, the FAA finds that the issue raised by AOPA is best addressed by the NOTAM/AIM Modernization effort rather than this rulemaking.

Boeing commented that, currently, not all areas that are publicized are also surveyed, controlled, and evacuated. Boeing stated that the need to survey and evacuate should be scalable and dependent upon the risk magnitude and area, remoteness of the hazard areas, capabilities for monitoring, and overall risk/benefit tradeoff. The FAA does not believe a change to the proposed rule is necessary to address these concerns. The requirement to survey, publicize, control, and evacuate each flight hazard area is scalable, as these measures are required ''to the extent necessary to ensure compliance with § 450.101.'' This reference to § 450.101 means that the need to control the hazard areas is dependent on the public risk criteria, as well as the inputs and assumptions used in the FSA.

Sierra Nevada commented that § 450.161 would be an increase in regulatory burden due to surveillance over a large area being cost-prohibitive and nearly impossible to implement for smaller companies. Sierra Nevada recommended that operators only be required to ensure NOTAMs and Notices to Mariners are in place prior to operation, and should not bear consequences if the public breaches those areas. Sierra Nevada also asked how an operator could reasonably survey an aircraft hazard area over a large area of ocean.

The FAA disagrees with this comment and notes that this requirement codifies current practice. The FAA further notes that the only change to current practice—the inclusion of people on ships in collective risk—actually decreases regulatory burden for waterborne vessel hazard areas. An operator is no longer required to evacuate and monitor areas where a waterborne vessel would be exposed to greater than 1×10^{-5} P_I. In issuing its first waiver of the existing requirement in § 417.107(b)(3),[176] the FAA explained that successful application of the public risk management for the protection of people in waterborne vessels has the potential for reducing launch costs by reducing delays due to ship traffic in warning areas while maintaining a high level of public safety. For example, prior to the waiver of § 417.107(b)(3), a launch from Cape Canaveral Air Force Station was delayed, in order to meet the requirements of § 417.107(b)(3), by the presence of a tug boat towing a large barge inside the ship hazard area. The final rule addresses Sierra Nevada's concerns regarding surveillance of a large portion of ocean by including people on ships in the collective risk criterion. Furthermore, the FAA notes that this requirement could be met a number of ways, including through an operator agreement with a Federal launch or reentry site or the FAA.

Virgin Galactic asked whether it is necessary to require an operator to meet the E_C criteria if the operator is using a flight hazard area, thus ensuring no member of the public is in the area. The FAA addressed this issue during the public comment period in ''Responses to the Public's Clarifying Questions Received by July 12, 2019.'' An E_C analysis is still required even if launch hazards are contained over regions of land, sea, or air that are completely void of members of the public because the systems necessary to achieve such containment, such as an FSS, may fail. If an FSS fails, debris may fall outside of hazard areas where members of the public are present. The E_C analysis ensures that the potential failure of those systems is accounted for when calculating risk to the public.

In the NPRM, proposed § 450.161(b) would have required an operator to perform surveillance sufficient to verify or update the assumptions, input data, and results of the FSA. The NPRM preamble stated that, given that there are numerous assumptions and input data that are critical to the validity of the FSA, this requirement could have a variety of surveillance implications beyond the surveillance necessary to ensure the public exposure at the time of the operation is consistent with the assumptions and input data for the FSA. As described in the NPRM preamble, an example would be that an FSA could assume that a jettisoned stage remains intact to impact or breaks up into pieces that are not all capable of causing casualties to people on the ground but could still be capable of causing casualties to people in a particularly vulnerable class of aircraft, such as helicopters.

In the final rule, the FAA maintains the requirement that an operator employ some type of surveillance (*e.g.,* telemetry data, or remote sensors such as a camera or radar) to verify that the jettisoned stage behaves in a manner consistent with the FSA if that behavior is germane to the size of the aircraft hazard area. The FAA clarifies that if an FSA includes conservative assumptions and inputs, or a sensitivity analysis to demonstrate that the assumptions regarding break-up of a jettisoned stage are not germane to the size of the aircraft hazard area, the operator will only be required under § 450.161(b) to demonstrate surveillance sufficient to verify the accuracy of the FSA. If the assumptions and inputs are sufficiently conservative, this contingency could mean an operator does not need to employ surveillance at all.

Blue Origin provided suggested text for § 450.161(b) related to vehicle tracking rather than surveillance. The FAA declines to adopt this change because vehicle tracking requirements in § 450.167 (Tracking) are distinct from the requirement to surveil the flight hazard areas in § 450.161. The requirements and comments regarding vehicle tracking are discussed in the preamble section associated with § 450.167.

CSF, Sierra Nevada, and SpaceX also commented that if a member of the public or another Federal agency chooses to breach a hazard area and put itself at risk, the operator should not bear the consequences. Many commenters identified this possibility as a problem in the case of a hazard area violation that occurs after the decision to commit to a reentry.

The FAA understands the unique challenges of reentry operations with respect to the control of hazard areas because of the long time lag between the commitment to reenter and the planned or potential unplanned vehicle presence

[176] *See* Waivers of Ship Protection Probability of Impact Requirement, 81 FR 28930 (May 10, 2016).

in a hazard area. The FAA will work with operators during the license application process in applying this requirement to ensure verification procedures protect the public adequately for each unique operation.

In the NPRM, proposed § 450.161(c) would require an applicant to publicize warnings for each flight hazard area, except for regions of land, sea, or air under the control of the vehicle or site operator or other entity by agreement. If the operator relies on another entity to publicize these warnings, the proposed rule required the operator to verify that the warnings have been issued. CSF and SpaceX commented that operators would have very little ability to ensure and enforce closures when launching from a Federal launch or reentry site or if the hazard area falls within a foreign country's airspace.

The FAA agrees with these comments. To address this issue, the FAA changes the language in proposed § 450.161(c) from ''verify that the warnings have been issued'' to ''determine whether the warnings have been issued'' in § 450.161(c)(1) in the final rule. The FAA recognizes that an operator would be unable to meet the proposed regulation to verify the warnings have been issued if the foreign Air Navigation Service Provider (ANSP) fails to publicize the warnings. The FAA also adds in § 450.161(c)(2) of the final rule that the operator must notify the FAA if the warnings have not been issued so that the FAA can determine if the launch or reentry can be conducted in a manner that protects the public sufficiently, and that this notification must provide sufficient information to enable the FAA to issue warnings to U.S. aircraft. An involved party could determine whether the warnings have been issued pursuant to the agreements the operator has with, for example, a Federal launch or reentry site or a foreign government. In cases in which a foreign ANSP does not issue the warnings in a timely manner, the operator must notify the FAA in accordance with a means of compliance accepted by the FAA. The means of compliance will describe information that the operators should communicate to the FAA to (1) show due diligence in the fulfillment of their requirements in accordance with agreements in place, and (2) enable FAA to issue warnings to U.S. aircraft. The FAA finds that the final rule requirement in § 450.161(c)(2) is responsive to the comment that operators have very little ability to enforce closures when launching from a Federal launch or reentry site or if the hazard area falls within a foreign country's airspace.

The FAA proposed in § 450.161(d)(1) that an applicant must submit a description of how the applicant will provide for day-of-flight surveillance of flight hazard areas, if necessary, to ensure that the presence of any member of the public in or near a flight hazard area is consistent with flight commit criteria developed for each launch or reentry as required by § 450.165(b). In the final rule, the FAA adds in § 450.161(d)(1) that the applicant must also provide for day-of-flight control of flight hazard areas. The FAA notes that the nature of any surveillance (in terms of extent and frequency) necessary to ensure conditions consistent with flight commit criteria is naturally linked to the level of control an operator can exercise to limit access to a flight hazard area.

In § 450.161(d)(2), the FAA adds as an application requirement that the applicant must submit a description of how they will provide for any publication of flight hazard areas necessary to meet the requirements of § 450.161(c). This application requirement is necessary for the FAA to evaluate compliance with the requirements of § 450.161(c), including verifying whether the warnings have been issued.

jj. Lightning Hazard Mitigation (§ 450.163)

In the NPRM, the FAA proposed to require operators to mitigate natural and triggered lightning by (1) implementing flight commit criteria that avoid and mitigate the potential for intercepting or initiating lightning strike or encountering discharge; (2) using a vehicle designed to continue safe flight if struck by lightning or encountering a nearby discharge; or (3) ensuring satisfaction of the safety criteria set forth in proposed § 450.101 in the event of a lightning strike on the vehicle.

In the final rule, the FAA adopts § 450.163 (Lightning Hazard Mitigation) with modification. It revises § 450.163 to remove paragraphs (a)(3) and (b)(3). It adds the modifier ''direct'' to ''lightning strike'' in paragraph (a)(1), to match the application requirement in paragraph (b)(1). The FAA also modifies § 450.163(a)(2) in response to a comment as described below.

Blue Origin commented that proposed § 450.163(a)(3) diverged from the preamble to § 450.163 and the rest of the proposed rule, which clearly convey that satisfaction of the safety criteria in proposed § 450.101 was not optional. An operator would be required to satisfy proposed § 450.101 regardless of whether it chooses to implement flight commit criteria or utilize a lightning-resistant vehicle.

The FAA agrees with Blue Origin's comment and revises § 450.163(a) by removing proposed § 450.163(a)(3). Proposed § 450.163(a)(3) was intended to cover an operator's use of physical containment as a hazard control strategy when damage to a vehicle caused by a lightning strike would not impact the safety of the launch. The FAA has found this section to be unnecessary because lightning would not be a concern for an operator using physical containment as a hazard control strategy since, by definition, the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area.

Blue Origin requested that the FAA define ''continue safe flight'' in proposed § 450.163(a)(2). In response, the FAA modifies § 450.163(a)(2) to require the operator to use a vehicle designed to protect safety-critical systems in the event of a direct lightning strike or nearby discharge. Thus, the final rule requirement in § 450.163(a)(2) mirrors the proposed application requirement in § 450.163(b)(2) to submit documentation providing evidence that the vehicle is designed to protect safety-critical systems against the effects of a direct lightning strike or nearby discharge.

Virgin Galactic expressed concern for the amount of time it would take operators to redesign their vehicles to satisfy proposed § 450.163(a)(2) and asked that the FAA ''grandfather'' currently licensed operators out of this requirement. The FAA notes that § 450.163(a) provides two ways for an operator to mitigate natural and triggered lightning and does not mandate a lightning-related design change. The decision to pursue flight commit criteria versus a lightning-resistant vehicle rests with the operator.

The performance-based standards set forth in § 450.163 will be accompanied by AC 450.163–1 ''Lighting Hazard Mitigation'' in the future, which will contain one, but not the only, acceptable means of compliance for § 450.163(a)(1). The AC will include references to NASA–STD–4010, as well as relevant standards for the design of a vehicle to withstand the direct and indirect effects of a lightning discharge. Commenters largely supported this approach. Blue Origin noted that, while the Lightning Flight Commit Criteria adopted by the FAA have successfully prevented lightning attachment to vehicles in the past, operators may demonstrate that the avoidance criteria can be satisfied with their specific mission profile and vehicle design. Aerospace Corporation echoed support for enabling operators to

develop new methods and evaluations for lighting avoidance and mitigation.

Regarding proposed § 450.163(a)(1), two commenters expressed concern that the FAA, in adopting only NASA–STD–4010 as an accepted means of compliance for now, may not accept unique means of compliance in the future. The Aerospace Corporation and Weather Modification International argued the FAA should adopt prelaunch in situ measurement of electric fields as a means of demonstrating compliance with § 450.163, noting that NASA–STD–4010 is imperfect because it relies exclusively on observable ground data.

The FAA considered using direct measurement of the electric field within a cloud as an option for compliance with § 450.163. However, the ambient electrostatic field within and near electrified clouds can vary rapidly in both space and time because of the charge separation and redistribution processes inside and around the clouds, and because lightning can rearrange this charge abruptly over distances of many kilometers. Because no measuring technique today can be applied everywhere simultaneously and it is difficult to prove that electric field measurements taken near the flight path at an earlier time will remain valid at the time of launch or landing, this option is not viable on its own.

The FAA agrees that the optimal standards for avoiding and mitigating natural and triggered lightning may be achieved through technological advancement in the future. Currently, NASA–STD–4010 is the only standard of which the FAA is aware that will satisfy the requirements of § 450.163(a)(1). However, ongoing research efforts could soon allow for modifications of the NASA's Lightning Launch Commit Criteria, providing additional means of compliance. As stated in the NPRM, the FAA anticipates that industry will develop and submit new standards to the FAA to serve as unique means of compliance under § 450.35(b).

The FAA also acknowledges the suggestion of Weather Modification International that the FAA take the lead in developing a definitive set of lightning standards. The FAA has traditionally relied upon the Lightning Advisory Panel, with its technical expertise in mitigating lightning hazards, to develop lightning standards. The FAA relied upon the lightning standards recommended by the Lightning Advisory Panel in developing the lightning requirements in part 417. Given the performance-based nature of this rule, the FAA is not prescribing a particular standard for mitigating lightning hazards, but instead will allow applicants to develop their own means of complying with § 450.163. The FAA notes, however, that the means of compliance identified, NASA–STD–4010, was developed by the Lightning Advisory Panel, and thus, would achieve the same result that the commenter requests.

Blue Origin commented that, to the extent the FAA looks to aircraft lightning protection standards (*e.g.,* AC 20–136B, AC 20–107B) to determine the appropriate industry standards applicable to § 450.163(a)(2), the agency should adopt only those standards clearly applicable to space vehicles. The commenter added that the use of SAE recommended practices would create an undue burden on applicants since the SAE protection rules apply to transport aircraft, which require a much higher level of safety than that prescribed by part 450.

The FAA agrees that only those aircraft standards which are appropriate to apply to space vehicles should be used to assess compliance with § 450.163(a)(2).

kk. Flight Commit Criteria (§ 450.165)

In the NPRM, the FAA proposed in § 450.165 that an operator establish and observe flight safety rules in order to initiate flight. The proposed rule also required an operator to establish and observe flight abort rules in order to end flight. Proposed § 450.165 would require that an operator's flight safety rules include flight commit criteria identifying each condition necessary to satisfy proposed § 450.101 prior to initiating flight. These flight commit criteria would include: (1) Surveillance; (2) monitoring of meteorological conditions; (3) implementing window closures for the purpose of collision avoidance; (4) monitoring the status of any FSS; and (5) any other hazard controls derived from system safety, computing system safety, or FSA.

In the final rule, the FAA adopts proposed § 450.165 with revisions. The FAA moves the flight abort rules proposed in § 450.165(c) to § 450.108. The discussion of the revisions related to abort rules in proposed § 450.165 is in the Flight Abort Rules section of the preamble. The FAA combines proposed § 450.165(a) and (b) into a single paragraph (a) to reflect that this section now only relates to flight commit criteria.

In addition, the FAA adds a requirement that the flight commit criteria must include confirmation from the FAA that the risk to critical assets satisfies the requirements of § 450.101(a)(4) or (b)(4). This requirement is consistent with the changes to the critical asset requirements discussed earlier in the preamble and ensures that a flight is not initiated if it does not meet the risk criteria. The FAA will work with the applicant to create a streamlined process to achieve this confirmation. The FAA anticipates that it will generally be able to provide this confirmation well before the actual flight countdown.

Sierra Nevada commented that the use of the term ''surveillance'' may be broader than the FAA intended. The FAA discusses surveillance in the preamble section for Control of Hazard Areas (§ 450.161).

ll. Tracking (§ 450.167)

In the NPRM, the FAA proposed vehicle tracking requirements, including that an operator would be required to measure and record in real time the position and velocity of the vehicle. The system used to track the vehicle would be required to provide data to determine the actual impact locations of all stages and components, and to obtain vehicle performance data for comparison with the pre-flight performance predictions. The FAA intended the proposed requirements to capture current practice. As explained in the NPRM, tracking data sufficient to identify the location of any vehicle impacts following an unplanned event are necessary to ensure a proper response to an emergency.[177]

CSF, SpaceX, SpinLaunch, and Virgin Orbit commented that the proposed language in § 450.167(a) could be interpreted as tracking stages and components all the way down to the earth or body of water. CSF also sought clarity regarding the intent of the requirement to ''provide data to determine the actual impact locations of all stages and components,'' and whether this requirement would mean that operators must predict the expected impact locations or actual impact locations. To clarify this point, CSF, SpaceX, and Virgin Orbit suggested using the phrase ''predict the expected impact locations'' rather than ''determine the actual impact locations.'' The FAA concurs and adopts the recommended change in the final rule. The change more accurately reflects the intent of the requirement.

Blue Origin commented that RCC 321 requirements to coordinate with the FAA to ensure timely notification of any expected air traffic hazard do not actually mention vehicle tracking, and that it may be possible to provide

[177] *See* 84 FR 15344.

notification of traffic hazards without the need for tracking (such as a straight up suborbital trajectory [178]).

Tracking data is an important element of current practice used to ensure the safety of people in aircraft. In the past, tracking vehicles was inherently a part of flight abort and an important means to ensure safety in the event of a mishap in which hazardous debris falls outside of designated hazard areas. During launch or reentry operations that lack the ability to inform the FAA rapidly of the volume and duration of airspace for which an aircraft hazard is predicted following a mishap, the FAA must close inordinately large regions of airspace to provide a sufficient level of safety to aircraft flying in regions where hazardous debris could fall in the event of a break-up. Although RCC 321 does not call for tracking per se, the FAA finds tracking essential to the safe and efficient integration of launch and reentry operations into the NAS. For example, the Columbia accident in 2003 [179] demonstrated that there is often a significant period of time between a vehicle break-up and when hazardous debris reaches aircraft altitudes. The time between vehicle break-up and when hazardous debris reaches aircraft altitudes enables the FAA to close a minimum amount of airspace while ensuring a high level of safety for aircraft flying in regions where hazardous debris could fall in the event of a break-up. As explained in the NPRM preamble, tracking data are generally necessary to ensure a proper response to an emergency, facilitate flight abort, obtain vehicle performance data for comparison with the preflight performance predictions in accordance with § 450.103(d), and facilitate safe and efficient integration of launch and reentry operations into the NAS. Therefore, the final rule is consistent with the NPRM and current practice.

CSF, Leo Aerospace, Microcosm, Sierra Nevada, and SpaceX commented that the proposed language regarding tracking was too broad and would seem to require an operator to track pieces of debris to impact during an off-nominal event. As clarified by the FAA during the public comment period in ''Answers to Clarifying Questions Received by June 28, 2019'' and ''Answers to Clarifying Questions Received by July 29, 2019,'' the term ''all stages and components'' does not mean that all debris must be tracked to the ground after a vehicle breakup.

CSF and SpaceX suggested adding the word ''nominal'' to this requirement when referring to flight tracking. The FAA declines to adopt this change because it is important to track during off-nominal trajectories as well, including during normal flight and for off-trajectory malfunctions at least until flight abort is initiated or vehicle break-up occurs. Tracking data can enable an appropriate response to an off-nominal situation, such as where to evacuate the public to protect against predicted toxic fumes or where to apply fire suppression resources.

Blue Origin, CSF, and SpaceX commented that real time telemetry is often not possible for the entire mission, such as when a vehicle passes over the horizon or during a reentry blackout period. The FAA concurs with the commenters that real time telemetry is not always possible. In the past, there were times during reentry that the presence of plasma typically blocked vehicle-to-ground communications. More recently, space-based tracking and communications have made it feasible to overcome reentry plasma and over the horizon limitations. However, the final rule does not require operators to use space-based tracking and communications to meet § 450.167 unless it is necessary to protect public safety, safety of property, and national security and foreign interests of the United States. The FAA does not currently foresee any licensed launch or reentry activity that will require the use of space-based tracking to protect public safety, safety of property, and national security and foreign interests of the United States. Furthermore, ''real time'' does not mean ''zero lag time.'' The tracking must be sufficient to meet the requirements in § 450.167(a) to predict the expected impact locations and obtain vehicle performance data for comparison with pre-flight predictions. The FAA would not hold an operator accountable if there was some lag for reasons outside of the operator's control. The FAA believes that this leeway answers Blue Origin's recommendation that tracking requirements be limited to phases of launch or reentry vehicle flight identified in § 450.113(a), since on-orbit tracking is not practical.

mm. Launch and Reentry Collision Avoidance Analysis Requirements (§ 450.169)

In the NPRM, the FAA proposed to update the information required for launch collision avoidance (LCOLA) and expand the analysis requirements to determine launch and reentry window closures, including updated protections for human spaceflight and additional closures to protect active payloads and prevent orbital debris generation. The FAA proposed that all operators would be required to come into compliance with the LCOLA requirements by the effective date of the rulemaking.

In the final rule, the FAA adopts § 450.169 with revisions. The finalized LCOLA rules better align with the existing processes used at Federal sites, provide adequate orbital safety measures for launch and reentry operations, and incorporate updated options for collision avoidance analysis. The FAA maintains that all operators must come into compliance with the LCOLA requirements by the effective date of this rule. The FAA adds the words ''are met'' to § 450.169(b) to fix a typographical error in the NPRM.

For an orbital or suborbital launch or reentry, § 450.169(a) requires an operator to establish window closures needed to ensure that the launch or reentry vehicle, any jettisoned components, or payloads, meet the identified requirements with respect to orbiting objects, not including objects being launched or reentered as part of the same launch or reentry activity (*e.g.,* dual manifested payloads). In performing a launch or reentry collision avoidance analysis against inhabitable objects, an operator may choose to stipulate an ellipsoidal separation distance, a spherical separation distance, or satisfy the probability of collision threshold (1×10^{-6}). Collision avoidance analyses must also account for other orbital objects, such as spacecraft, and tracked debris. For these uninhabitable active objects, operators must satisfy either a less restrictive probability of collision threshold (1×10^{-5}) or a spherical separation distance of 25 km. As discussed more fully later, in response to comments, the FAA revises § 450.169(a)(3), which covers all other known orbital debris, so that operators must maintain either a spherical separation distance of 2.5 km or a less restrictive probability of collision threshold (1×10^{-5}) from orbital debris that is medium or large in size (radar cross section greater than $0.1m^2$), as identified by the FAA or another Federal Government entity.

The FAA also received a number of comments to proposed § 450.169(d), which identified when LCOLA analysis would not be required. This section was not a new requirement, but a consolidation of the existing regulations, § 417.231(d) and Appendix C to part 417 under C417.11. As

[178] A straight up suborbital trajectory is a nearly vertical suborbital trajectory. ''Suborbital trajectory'' is defined in § 401.5 as the intentional flight path of a launch vehicle, reentry vehicle, or any portion thereof, whose vacuum instantaneous impact point does not leave the surface of the Earth.

[179] *See* Report of Columbia Accident Investigation Board at *https://www.nasa.gov/columbia/home/CAIB_Vol1.html.*

proposed, an LCOLA analysis would not be required if the maximum altitude attainable by a launch operator's suborbital launch vehicle and any released debris is less than 150 km. The proposed requirement stated that the maximum altitude attainable is an optimized trajectory, assuming maximum performance within 99.7 percent confidence bounds, extended through fuel exhaustion of each stage, to achieve a maximum altitude.

SpaceX opposed the requirement that LCOLA exclusions (launch and reentry window closures) be based on fuel depletion trajectories or the maximum attainable altitude of a launch vehicle. SpaceX commented that both bases exceeded the scope of past requirements and requested that LCOLA exclusions be based exclusively on the maximum performance case. SpaceX also recommended the FAA delete proposed § 450.169(d) due to unclear technical or public safety benefits. Blue Origin recommended that fuel exhaustion from each stage be excluded from proposed § 450.169(d) because remaining fuel will always be required to land RLVs.

The FAA disagrees with the recommendation to remove § 450.169(d). The FAA notes that, without this subsection, operators would need to conduct LCOLA analyses for all launches, regardless of altitude. The FAA has determined that no LCOLA analysis is needed for missions that do not exceed 150 km in altitude because orbital objects below this level are exceedingly sparse and usually are not present for long durations. Furthermore, launch operators currently do not provide trajectories for stages or objects that do not exceed 150 km. As such, it is appropriate to specify in the regulation when the LCOLA analysis is not required.

The FAA agrees, however, that the language proposed in § 450.169(d) did not reflect current practice and could prove impracticable. The requirement for accomplishing LCOLA for all objects launched over 150 km was complicated by existing regulatory language on maximum altitude calculations. LCOLA is accomplished using only the nominal trajectory provided by the launch or reentry operator. No screening is accomplished using maximum possible altitudes because there is no planned trajectory to screen, and the FAA did not intend for operators to develop alternate trajectories. Therefore, the FAA revises § 450.169(d) so that no LCOLA is required if the object's maximum planned altitude is less than 150 km.

Similarly, the FAA revises § 450.169(b)(1) to require LCOLA analysis only for the entire segment of flight of a suborbital launch vehicle above 150 km. The FAA agrees with SpaceX's comment that requiring operators to conduct LCOLA analyses below 150 km is unnecessary and would prove burdensome. This revision is consistent with the requirements for orbital vehicles and acknowledges that only the portions of flight above 150 km are screened in either case.

Virgin Galactic recommended that proposed § 450.169(d) be retitled, ''Applicability.'' SpaceX recommended the regulation refer to a ''body'' or ''object,'' rather than ''suborbital'' or ''debris.'' The FAA agrees with Virgin Galactic and SpaceX that these terms and the title could be clearer and more consistent with current usage. The FAA retitles § 450.169(d) ''Exception,'' which more accurately describes this subsection, and substitutes ''object'' in place of suborbital vehicle in § 450.169(d).

Regarding requirements proposed in § 450.169(a) and (b), the FAA received numerous comments questioning the need for a 200 km keep-away distance for human spaceflight and the absence of probability of collision screening for debris. Numerous commenters also recommended a narrower trajectory data requirement for suborbital launches.

An individual commenter stated that a spherical separation distance of 200 km from inhabitable objects, as set forth in proposed § 450.169(a)(1)(ii) and (a)(1)(iii), may not be appropriate due to advances in spaceflight systems such as autonomous flight termination systems (AFTS) and autonomous flight systems (AFS). The commenter recommended the FAA allow the 200-km limit to be tailored depending on the reaction time of the flight termination system. The commenter also suggested the 200-km limit could be tailored if the launch vehicle contains a traffic collision avoidance system (TCAS) (akin to what aircraft use to avoid planes) that can reasonably avoid nearby crewed vehicles.

The FAA disagrees that a spherical separation distance of less than 200 km is appropriate for inhabitable objects. No termination systems are currently used in orbit, and termination systems are not likely to be viable safety measures in orbit. The 200 km safety standoff distance is only for orbital spaceflight protection; it is not a separation standard for airspace integration. An orbital termination system would increase the danger to human spaceflight and increase the orbital debris population. Safety and efficiency must be accomplished with a screening prior to launch. Launch vehicles do not have TCAS-like operations and are not expected to acquire such capabilities.

SpaceX asked the FAA to explain why § 450.169(a)(3) requires operators to screen orbital debris greater than 10 cm^2 against a spherical miss distance of 2.5 km, rather than meet a probability of collision threshold, as the FAA allows for inhabitable objects and active payloads. SpaceX stated that the requirement to maintain a spherical miss distance, without the option to evaluate probability of collision, is more restrictive than current requirements and inconsistent with USAF practices. SpaceX argued there should be an option to waive miss distance less than 2.5 km if probability of collision is sufficiently low, as is done for active payloads.

The FAA agrees with SpaceX that probability of collision could be used for medium and large orbital debris because those objects are routinely well-tracked and have valid orbital covariances available. This option would provide for higher fidelity screening of collisions that could produce significant amounts of orbital debris. As such, the FAA revises § 450.169(a)(3) to allow operators to screen for orbital debris identified by the FAA or other Federal Government entity using either a spherical separation distance of 2.5 km or a less restrictive probability of collision threshold (1×10^{-5}). The use of probability of collision will require realistic covariance data on both the launching object and the screened orbital object to produce meaningful results. Operators who do not provide realistic covariance will be required to have the launch or reentry screened with stand-off distance. The probability of collision threshold required for debris is the same as that required for active payloads in § 450.169(a)(2), which mirrors current USAF requirements. The USAF requirements for debris screening use the same probability of collision as a high-fidelity analysis in place of both 25 km and 2.5 km standoff screening. The FAA slightly relaxed the debris screening size requirement to include only medium (0.1 m^2 to 1 m^2) and large objects (greater than 1 m^2) in order to provide for accurate use of probability of collision analysis. Medium and large debris objects are well-tracked, and the U.S. Government maintains accurate covariance on these objects. This requirement achieves the objectives stated in the NPRM of avoiding conjunction analysis with micro-debris, while preventing the generation of space debris since these objects are well-tracked and capable of

creating significant amounts of persistent space debris in the event of a collision.

In proposed § 450.169(f), the FAA would require an operator to prepare a collision avoidance analysis worksheet for each launch or reentry using a standardized format that contains the input data required by Appendix A to part 450. Proposed § 450.169(f)(1) would require an operator to file the input data with a Federal entity identified by the FAA and with the FAA at least 15 days before the first attempt at the flight of a launch vehicle or the reentry of a reentry vehicle or in a different time frame in accordance with proposed § 404.15. Proposed § 450.169(f)(2) would require an operator to obtain a collision avoidance analysis performed by a Federal entity identified by the FAA 6 hours before the beginning of a launch or reentry window.

CSF and SpaceX requested the FAA alter proposed § 450.169(f)(1) to require operators to file input data 7 days before launch or reentry rather than 15 days. The commenters stated the 15-day requirement conflicts with current processes at Federal launch or reentry sites, which allow submissions 7 to 10 days before launch or reentry. CSF and SpaceX stated that 7 days prior to launch has proven sufficient to produce screening results by 6 hours before launch. CSF and SpaceX also indicated that the requirement to obtain final results 6 hours before launch was inconsistent with current practice. The Federal entity performing LCOLA screenings delivers the final data hours before launch. CSF and SpaceX recommended adding a clause to proposed § 450.169(f)(2) allowing trajectory data to be delivered within timelines agreed to by the launch operator and the entity performing the screening. Alternatively, SpaceX recommended the FAA either require the data be submitted 3 hours before launch in § 450.169(f)(2), as currently practiced by the USAF, or allow operators flexibility to obtain LCOLA data ''within'' 6 hours of the launch or reentry window beginning, but no later than 3 hours before launch.

The FAA partially agrees with CSF's and SpaceX's recommended changes to the timelines established in § 450.169(f)(1) and (f)(2). For launch or reentry operations that have successfully developed an internal process that results in repeatable LCOLA data submission, the FAA recognizes that 7 days prior to launch is an adequate time for Federal entities to process the LCOLA data based on recent LCOLA submissions reviewed for the last year. The FAA revises § 450.169(f)(1) to require that most operators submit LCOLA data at least 7 days in advance of launch or reentry. However, the FAA disagrees that a shorter time frame would be appropriate for operators that have not yet conducted launch or reentry activities. The FAA has repeatedly noted that LCOLA data submitted from first-time launch or reentry operators often require significant reiterative work to achieve an acceptable submission. As such, the FAA will require operators that have not yet received conjunctive assessments to submit LCOLA data at least 15 days in advance of launch or reentry. This approach is similar to that of the USAF, which requires entities that have not yet received conjunctive assessments to submit LCOLA data 30 days in advance of launch. The FAA revises § 450.169(f)(1)(i) to require that entities that have not yet received conjunctive assessments to submit LCOLA data at least 15 days in advance of launch. All other operators must submit LCOLA data at least 7 days in advance of launch.

The FAA agrees that the requirement to receive results within 6 hours before beginning of the launch or reentry window could be reduced to 3 hours. Later delivery will produce LCOLA results that are timelier and therefore more accurate for orbital safety purposes. Therefore, the FAA revises § 450.169(f)(2) to alter delivery to 3 hours before beginning of the launch or reentry window.

Boeing, Lockheed Martin, Northrop Grumman, and ULA commented that much of proposed § 450.169(a) focused on analysis that was not applicable to operators since applicants do not have the data and tools to perform LCOLA analysis, but merely provide inputs and implement operational windows based on closures provided. The commenters advocated for a streamlined commercial process for licensed launches or reentries that do not occur at a Federal launch or reentry site, in which the FAA would take the applicant's trajectory inputs to the Federal agency responsible for LCOLA analysis and establish stay-out windows. The commenters argued a standardized process would eliminate the need for multiple applicants to establish interfaces and procedures with an agency that rarely deals with commercial (space transportation) entities.

The FAA declines to streamline the LCOLA process further by removing the analysis requirements of § 450.169(a), such that applicants only need to provide data and abide by results. Transparency in LCOLA analysis provides confidence and understanding of the LCOLA process for launch, reentry, and payload, for operators as well as the public.

The same commenters noted that the FAA could act as a go-between entity for all operators in a similar manner to Federal sites' processes. The FAA agrees that operators could use the FAA or the Federal sites as conduits to the LCOLA processing entity and recognizes that this flexibility remains in the final rule language. This type of activity is appropriately coordinated during the launch operator or reentry operator pre-application discussions. The FAA disagrees with requiring the FAA to act as a pass-through because the FAA believes that removing launch operators from direct contact with the USAF 18th Space Control Squadron could have unintended negative consequences. For instance, an early orbit breakup emergency may require prompt exchange of data between launch operators and on-orbit support services providers using processes already tested during LCOLA development and adding a pass-through element could hamper or slow analysis, notifications, and potential mitigation actions. Moreover, the FAA does not place orbital safety analysts on duty during launch or reentry operations. To adequately support the passthrough, the FAA would need to establish launch support teams and exercise the team in advance of emergency operations.

Blue Origin and SpaceX recommended the FAA allow LCOLA analyses to be conducted by non-Federal entities. Blue Origin recommended that proposed § 450.169(e) require LCOLA analyses be obtained from Federal entities, unless otherwise agreed to by the Administrator. SpaceX recommended proposed § 450.169(f) allow operators to file input data and obtain LCOLA analyses from approved third parties, as opposed to Federal entities. SpaceX argued the FAA should foster a competitive market and allow flexibility in using commercial services as commercial entities enter the space situational awareness (SSA) market and aim to provide the same services as Federal entities. Virgin Galactic asked if the FAA anticipated a cost associated with obtaining the analysis from the Federal entity.

The FAA declines to remove the reference to Federal entities in § 450.169. Although commercial entities are developing space traffic support services that could eventually provide adequate safety for launch collision avoidance, to date, only Federal entities have full access to the authoritative catalog maintained by the DOD. Rather

than remove this clause, the FAA adds the phrase, ''or another entity agreed to by the Administrator,'' to § 450.169(e) in order to provide flexibility should the space traffic authority and framework change over time. The Administrator may allow another entity to provide this service based on a demonstration that the data includes a complete and accurate catalogue of all identifiable objects in the relevant space environment. Currently, the DOD is the only entity that meets this criterion. In response to Virgin Galactic's question regarding cost, the current LCOLA analysis from the U.S. Government is provided free of charge.

SpaceX recommended the FAA defer to or allow operators to use the LCOLA processes and standards of Federal launch or reentry sites for launches from Federal sites as means of compliance. SpaceX argues that doing so would minimize confusion regarding the applicable standards and procedures at different operating sites. SpaceX also suggested that § 450.169(e) be revised to state that operators may use Federal launch or reentry site services with existing policies and processes to ensure acceptable compliance.

The FAA declines to defer to the Federal launch or reentry sites. The FAA and Federal sites have different waiver requirements and processes. The FAA finds the language as proposed in the NPRM is adequate when coupled with the existing waiver process and equivalent level of safety process. In addition, the FAA notes that launches from non-Federal sites are not required to follow Federal site practices, and using a single FAA standard minimizes confusion both on and off Federal launch or reentry sites.

Citing the discrepancy between the proposed collision avoidance analysis and current USAF practice, CSF stated the proposed rule attempted to ''fix'' parts of the licensing process that were not broken.

The FAA disagrees that the collision avoidance analysis process is incompatible with the current USAF practice. The procedures for launch collision avoidance under §§ 417.107, 417.231, 417.31, and 417.43 did not reflect current practice as they excluded any probability of collision, referenced outdated processes and agencies, and required outdated adjustments to closures. The updated LCOLA process is compatible with USAF practices where appropriate (*e.g.,* LCOLA timelines, screening options for human spaceflight protection, and active payload protection), noting that the FAA regulation must also guide operations of launch and reentry operations at non-Federal sites.

nn. Safety at End of Launch (§ 450.171)

In the NPRM, the FAA proposed in § 450.171 (Safety at End of Launch) requirements for the prevention of creating orbital debris, with which an applicant would be required to demonstrate compliance in its application.

In the final rule, the FAA adopts § 450.171 as proposed. The FAA did not receive comments on these proposed requirements.

oo. Mishap (Definition, §§ 450.173 and 450.175)

i. Mishap Definition

In the NPRM, the FAA proposed to consolidate the definitions of ''Mishap,'' ''Launch Accident,'' ''Launch Incident,'' ''Reentry Accident,'' ''Reentry Incident,'' ''Human Spaceflight Incident,'' and ''Launch Site Accident'' under the definition of ''Mishap'' in § 401.5. The FAA proposed four mishap categories, from most severe (Class 1) to least severe (Class 4).

In the final rule, the FAA does not adopt the proposed classification system. Instead, the FAA combines the substantive criteria of Mishap Classes 1 through 4 under the definition of ''mishap'' in § 401.7. The revised definition describes events that constitute a mishap in a straightforward manner that better corresponds to regulatory requirements. The FAA incorporates additional changes to the final rule as discussed in the following paragraphs.

Numerous commenters from industry expressed confusion about the types of activities that would fall under each class. The commenters questioned the necessity of classifying mishaps based on severity since the regulatory requirements were largely the same for all mishaps.

The FAA reviewed the regulatory requirements associated with each of the proposed mishap classes and agrees there were no significant differences among the regulatory requirements for each class. The requirements to report, respond to, and investigate mishaps are incumbent upon an operator regardless of a mishap's severity. Mishap classes are not needed to achieve the objective of consolidating mishap-related terms and streamlining the requirements to report, respond to, and investigate mishaps. Accordingly, the FAA removes the proposed classification system. Except as discussed later in this preamble, the criteria proposed under each mishap class have been consolidated under ''mishap'' in § 401.7.

In the NPRM, the FAA proposed that a Class 1 mishap would include any event resulting in (1) a fatality or serious injury (as defined in 49 CFR 830.2) resulting from licensed or permitted activity to any person who is not associated with the licensed or permitted activity, or (2) a fatality or serious injury to any space flight participant, crew, or government astronaut. This proposal was consistent with longstanding definitions of ''launch accident'' and ''reentry accident'' in § 401.5.

A fatality or serious injury to a person associated with licensed or permitted activity constitutes a mishap under § 401.5, rather than a launch or reentry accident. The FAA proposed to incorporate each of the mishap-related terms found in § 401.5 under the definition of ''mishap.''[180] As such, save for the removal of the $25,000 monetary threshold, all events that meet the current accident, incident, and mishap definitions would continue to be mishaps under the consolidated definition.[181] In combining the mishap-related terms, the FAA inadvertently excluded from the proposed definition a fatality or serious injury to persons associated with licensed or permitted activity, which has been covered by the term ''mishap'' in § 401.5. The FAA did not intend to depart from current practice by excluding these serious events from the definition, as evidenced by the NPRM preamble. In revising the definition of ''mishap,'' the FAA stated its intent to streamline and clarify existing definitions, eliminate the monetary threshold, and consolidate the accident and incident investigation sections of parts 417, 420, 431, 435, 437 into one section applicable to all licenses, permits, and vehicles.[182] In proposing to consolidate existing definitions, the FAA did not propose to narrow the scope of activities deemed a mishap. In the final rule, the FAA revises the definition of ''mishap'' to include any fatality or serious injury resulting from licensed or permitted activity, irrespective of the person's involvement in the launch activity.

The FAA consolidates under paragraph (1) of the definition those criteria proposed for Mishap Class 1 and the previous definition of ''mishap'' in § 401.5. This revision is consistent with the mishap reporting requirements

[180] 84 FR 15351 (''The proposed mishap classification system would streamline and clarify the current accident, incident, and mishap definitions to create four mishap categories organized by severity, from most severe (Class 1) to least severe (Class 4).'').

[181] 84 FR 15352.

[182] 84 FR 15351.

under § 450.173(c)(1) for the occurrence of a fatality or serious injury during FAA-authorized activities. The FAA removes the phrase ''including ground activities at a launch or reentry site'' from the criterion addressing fatality or serious injury because the phrase ''events associated with a licensed or permitted activity'' adequately covers such activities.

In the final rule, the FAA re-designates criterion (1) of proposed Mishap Class 2 as paragraph (2) of the definition, which applied to the malfunction of an FSS or safety-critical system. The FAA notes that it removed the term ''flight safety system'' from paragraph (2) because an FSS is a safety-critical system.

Paragraph (7) of the definition consolidates two criteria proposed under Class 3 and 4 for permanent loss of a vehicle during licensed and permitted activity, respectively. Since the FAA is discarding the mishap classification system, there is no longer a need to differentiate loss of a launch or reentry vehicle during licensed versus permitted activity. Nor does the FAA intend to differentiate loss of a ''vehicle'' from loss of a ''launch or reentry vehicle.''

The FAA proposed to replace the clause, ''failure to complete a launch or reentry as planned,'' in the previous definition of ''mishap'' in § 401.5, with the clause, ''failure to achieve mission objectives.'' AIA, Sierra Nevada, and SpaceX objected to this criterion, arguing that failure to achieve mission objectives related to mission assurance and exceeded the FAA's authority to ensure public safety.

Based on industry comments, the FAA reverts to the original phrase, ''failure to complete a launch or reentry as planned,'' but adds a citation to a regulatory requirement that narrows the scope of this criterion. Failure to complete a launch or reentry according to the parameters provided by the operator under the pre-flight reporting requirements of § 450.213(b) [183] will constitute a mishap. This criterion more accurately reflects the scope of activities that the FAA deems to be a mishap and alleviates the commenters' concerns about mission assurance.

The FAA removes from the final rule all references to the proposed mishap classes. The FAA revises § 450.131(a)(2) to clarify that a probability of failure analysis must account for data on any mishap and anomaly. While the NPRM stated that the probability analysis must account for all partial failures and anomalies, ''including Class 3 and Class 4 mishaps,'' the language implied that it would also apply to Class 1 and Class 2 mishaps—the more severe events. The FAA replaces the mishap classes referenced in § 450.173(a) with the term, ''mishap.'' Finally, the FAA replaces the mishap classes referenced in § 450.219(b) with a reference to the portion of the mishap definition that corresponds to the proposed requirement: Events listed in paragraphs (1) through (5) and (8).

The removal of the mishap classes dispenses with commenters' requests for clarification or guidance in ACs on applying and differentiating the proposed mishap classes.

The final rule adds three changes to sections that cross-reference the mishap-related terms that the FAA proposed to replace with the revised mishap definition: §§ 420.61(b), 437.87(b), and 460.45(d). The FAA replaces the term ''launch or launch site accident'' in § 420.61(b) with a reference to the portions of the mishap definition that replace these terms: Paragraphs (1), (5), and (8). The FAA also replaces the word ''shall'' with the word ''must'' in § 420.61 because ''shall'' is no longer used in FAA regulations. Similarly, in § 437.87(b), the FAA replaces the phrase, ''launch or reentry accident or incident,'' with a reference to corresponding portions of the mishap definition in paragraphs (1) through (3), (5), and (8). As noted in the section of this preamble discussing the compliance period for legacy licenses (§ 450.1(b)), the FAA revises § 460.45(d) to require part 415, 431, and 435 licensees to apply the mishap-related definitions in § 401.5, and part 450 licensees to apply the definitions in § 401.7 when describing the safety record of the vehicle to space flight participants. Specifically, § 460.45(d)(1) requires that part 450 licensees identify events that meet paragraphs (1), (4), (5), and (8) of the definition of a mishap in § 401.7, which occur during and after vehicle verification performed in accordance with § 460.17.

The FAA also revises § 420.59 to identify the portions of the mishap definition applicable to launch site operators licensed under part 420. Not all of the events described under the definition of ''mishap'' apply to part 420 licenses, which do not authorize launch or reentry activities, though the NPRM did not state this fact expressly. Nor did the FAA intend the revised definition of ''mishap'' to expand the scope of the previous ''launch site accident'' definition under part 420. The FAA therefore revises § 420.59(a) to state that a licensee must report, respond to, and investigate mishaps that meet paragraph (1) or (5) of the definition of ''mishap'' in § 401.7. The FAA specified in the final rule that part 420 licensees must prepare mishap plans that meet § 450.173(b) through (f), including allocation of roles and responsibilities between the launch operator and site operator for reporting, responding to, and investigating any mishap during ground activities at the site, to specify the scope of the mishap plan more accurately. The FAA also deletes the word ''response'' in § 420.59(a) since § 450.173 and the rest of § 420.59 refer to a ''mishap plan,'' not a ''mishap response plan.''

AIA and Virgin Galactic commented that the term ''failure of a safety organization'' in the ''mishap'' definition was unclear. The FAA notes this term previously appeared under ''launch incident'' and ''reentry incident'' in § 401.5. ''Failure of a safety organization'' occurs when an operator fails to complete an action expected or required by the safety organization, or when the organization stops functioning normally, such that it creates a public safety risk. For example, the FAA would consider an operator's failure to follow existing safety processes or procedures, thereby placing the public at risk, a failure of a safety organization. Additional examples include (1) the failure of operator personnel to communicate a hold condition upon a violation of launch commit criteria, (2) a safety official failing to report potential safety matters to the mission director, or (3) the failure of an organization to recognize and mitigate a hazard, resulting in a public safety risk. No change was made to the regulation based on this comment.

SpaceX and Virgin Galactic sought clarification on the meaning of ''high risk'' of causing serious or fatal injury and ''substantial damage'' to property. SpaceX requested examples of high risk versus non-high risk events. AIA asked how the FAA would determine whether an event rises to the level of ''high risk.'' Virgin Galactic recommended ''high risk'' be defined in § 401.5 as an event that would have caused a casualty had one or more humans been present.

The FAA has used ''high risk'' of causing serious or fatal injury to define ''human space flight incident'' in § 401.5. As stated in the FAA's ''Answers to Clarifying Questions

[183] As discussed later in the preamble, § 450.213(b)(2) requires a licensee to submit planned mission information, including the vehicle, launch site, planned flight path, staging and impact locations, each payload delivery point, intended reentry or landing sites including any contingency abort location, and the location of any disposed launch or reentry vehicle stage or component that is deorbited.

Received by June 28, 2019,'' [184] the FAA would consider any off-nominal event during pre-flight or flight operations that posed a high probability of fatality or serious injury to spaceflight participants, crew, government astronauts, or the public, to be ''high risk.'' The FAA stated in the NPRM that it would determine on a case-by-case basis whether damage to property not associated with the licensed activity is ''substantial damage,'' based on such factors as direct replacement cost, repair cost, and the property's intended use and functionality. When making a substantial damage determination, the FAA will include damage caused by debris impacts, toxic plumes, and fires ignited by the vehicle or its debris. The FAA provided, as an example, structural damage to public property exceeding 50 percent of its market value, such as a failed launch attempt with debris impacts outside a defined hazard area resulting in a post-impact fire and loss of a residential structure. The FAA will evaluate unplanned damage to property associated with a licensed or permitted activity on the same bases. Examples might include a major repair or replacement of launch facilities due to an unsuccessful launch attempt, including processing facilities, launch pads, or propellant tanks, based on cost of repair or replacement or loss of use. Similar to the NTSB's definition of ''substantial damage'' (49 CFR 830.2), under paragraph (6) of the ''mishap'' definition in § 401.7, the FAA may deem any damage that adversely affects the structural strength, performance, or flight characteristics of a launch or reentry vehicle which normally require major repair or replacement of the affected component, to be substantial.

The FAA declines Virgin Galactic's suggested definition of ''high risk'' because the suggested standard is too narrow and would exclude serious injury short of fatality. As noted above, the FAA would consider any off-nominal event during pre-flight or flight operations that pose a high probability of fatality or serious injury to spaceflight participants, crew, government astronauts, or the public, to be high risk. The FAA intends ''high risk'' to cover events akin to a near miss or close-call. This approach is consistent with USAF and NASA practices. Virgin Galactic's suggestion would prove impracticable, requiring near certainty that a casualty would have occurred.

Virgin Galactic recommended the FAA prescribe a timeline and specific process for determining whether ''high risk'' or ''substantial damage'' occurred. Virgin Galactic suggested the FAA develop such a process and incorporate it elsewhere in the regulations, not in the definition of ''mishap.'' Virgin Galactic argued the FAA should have no more than 14 days to make these determinations in order to minimize operational impacts.

It would not be appropriate to limit the time frame or implement procedures to determine whether an event posed a high risk of causing serious or fatal injury or resulted in substantial damage to property. Although the FAA will begin to evaluate a mishap upon receiving notice and details of the event, the rate at which the FAA can make these determinations will necessarily depend on the attendant circumstances and information supplied by the licensee. Moreover, the FAA retains the ability to modify its determination upon receipt of new information about the mishap.

SpaceX recommended the FAA remove ''government astronauts'' from the ''mishap'' definition because, unlike the uninvolved public, those individuals accept risk by virtue of their informed involvement in a vehicle's flight. Acceptance of risk does not preclude a fatality or serious injury from being considered a mishap. The FAA removes the references to space flight participants, government astronauts, and crew from the ''mishap'' definition to make it clear that the FAA will deem any fatality or serious injury associated with licensed or permitted activity a mishap irrespective of whether persons are involved in the licensed activity.

SpaceX recommended the Class 2 definition be limited to events ''during a licensed or permitted activity,'' rather than events ''associated with'' licensed or permitted activity. The commenter offered no rationale for temporally limiting the criteria now described in paragraphs (2) through (5) of the ''mishap'' definition, and the FAA sees no reason to do so. The FAA would only deem a mishap those events that are within the scope of the FAA's statutory authority. No change to the regulation is made based on this comment.

Sierra Nevada commented that treating the impact of a vehicle, payload, or components thereof ''outside the designated area'' as a mishap was overly prescriptive and unrealistic. Sierra Nevada commented that since hazard areas are generated as probability contours, not contours of total containment, debris could realistically exist outside the hazard area that would not warrant segregation in the event of a breakup scenario. Sierra Nevada also recommended removing from proposed § 450.173(d) the requirement to report vehicle or debris impact points outside the hazard area to the FAA, which it claimed was burdensome, cost prohibitive, and unreasonable.

The criterion cited by Sierra Nevada, now captured in paragraph (8) of the mishap definition, does not require licensees to track every possible piece of debris in an off-nominal scenario, but rather only debris that presents a hazard to the public. The proposed criterion closely followed the definitions of ''launch accident'' and ''reentry accident'' in § 401.5, but used ''hazard area'' in lieu of ''impact limit lines'' and ''designated'' landing or reentry site, to be consistent with the hazard analysis framework set forth in part 450. To clarify the scope of this mishap criterion, the FAA replaces the term ''vehicle or debris'' in paragraph (8) with the term ''hazardous debris,'' which is defined in § 401.7. Thus, this criterion applies to the impact of hazardous debris (*i.e.,* debris capable of causing a casualty or loss of functionality to a critical asset) outside the planned landing site or hazard area. The occurrence of debris outside the hazard area that does not meet the definition of ''hazardous debris'' in § 401.7 is not a mishap.

The FAA similarly revises § 450.173(c)(3)(iv) to require that operators identify ''hazardous debris'' impact points as part of a preliminary mishap report, so that the FAA can assess potential public safety risks. The FAA makes this change to be consistent with the new definition of ''hazardous debris,'' and it is consistent with the intent of the proposed regulation. The FAA also replaces the term ''impact area'' with the term ''designated hazard area'' to be consistent with the terminology used in the mishap definition. This revision does not change the scope of the requirement from the NPRM; the FAA only requires an operator to report the hazardous debris impact locations, not all debris impact locations. Use of the term ''hazard area'' is also consistent with requirements for an operator to establish ''hazard areas'' under part 450 to protect the public from hazards associated with their operations.

The requirement to track and report hazardous debris is reasonable, given that operators must employ vehicle tracking for normal flight, and hazardous debris falling outside the designated area poses a serious risk to public safety. In the event of a vehicle breakup, operators should be able to approximate any hazardous debris impacts in relation to the designated landing site or hazard area based on the

[184] *See* FAA–2019–0229–0106.

vehicle's last-known state vector or other tracking resources required for normal flight.

ii. Mishap Plan (§ 450.173)

In the NPRM, the FAA proposed to consolidate mishap planning, reporting, response, and investigation requirements under proposed § 450.173. The FAA also proposed to revise §§ 420.59 and 437.41 to require an applicant to submit a mishap plan that meets the requirements of § 450.173. Proposed § 450.173(c) required an operator to report to and cooperate with FAA and NTSB investigations and designate one or more points of contact for the FAA and NTSB. Proposed § 450.173(d) required operators to notify the FAA of mishaps and submit a preliminary report within certain time frames. Proposed § 450.173(f) required that, in the event of a mishap, an operator must investigate the root causes of the mishap and report investigation results to the FAA.

Virgin Galactic broadly expressed support for the proposed rule. Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended adding to proposed § 450.173(f) a requirement for licensees to support any NTSB or government agency-led mishap investigation and to cooperate with any other government investigative agencies.

The FAA declines to incorporate the suggested addition. Upon review of the NPRM and comments received, the FAA determines that the requirement originally proposed in § 450.173(c) regarding NTSB and FAA cooperation is unnecessary. Section 450.13 (Rights Not Conferred by a Vehicle Operator License) plainly states that issuance of a license does not relieve a licensee of its obligation to comply with all applicable requirements of law or regulation. The duty of operators to comply with lawful investigations, whether conducted by the FAA or another entity with investigative authority, exists irrespective of the language proposed in § 450.173(c). Accordingly, the FAA removes proposed § 450.173(c) from the final rule. For the same reason, the FAA also removes paragraph (b)(2) from proposed § 420.59 (Mishap Plan). Operators remain responsible for reporting investigation results to the FAA under § 450.173(e).

Sierra Nevada asked whether licensees must coordinate with the FAA and NTSB for all mishaps. For the reasons stated above, the FAA removed the requirement proposed in § 450.173(c).

The National Fire Protection Association (NFPA) recommended the FAA revise proposed § 450.173(e), which contained emergency response requirements, to require a level of safety based on its spaceport fire safety and emergency response standards. The FAA supports the development of industry consensus standards for fire safety and emergency response, but disagrees that it would be appropriate to prescribe such a code or standard in this performance-based rule.

In addition to removing proposed § 450.173(c), the FAA replaces the term ''vehicle and debris impact points, including those outside a planned landing or impact area'' in proposed § 450.173(d)(3)(iv) with the term ''hazardous debris impact points, including those outside a planned landing site or designated hazard area'' in § 450.173(c)(3)(iv).[185] This change is consistent with changes previously discussed in the preamble. Lastly, the FAA revises the emergency response requirements in § 450.173(d)(1) to include the term ''property'' because, as discussed in this preamble, the FAA removed the reference to ''property'' from the definition of ''public'' in § 401.7. The FAA adopts the rest of this section of the proposed rule without change.

iii. Test-Induced Damage (§ 450.175)

In the NPRM, the FAA proposed to give license applicants and licensees the option to pre-coordinate testing activities with the FAA. This pre-coordination would take place during FAA-licensed activities to prevent the FAA from labeling test failures or associated damage as mishaps.

In the final rule, the FAA adopts § 450.175 with a modification. Section 450.175 will only apply to licensees or license applicants seeking this exception. The FAA will consider test failures and damage covered by this section, including damage to ground support equipment, ground support systems, and flight hardware, as test-induced damage and not a mishap, so long as the failure falls within the pre-coordinated scope and FAA-approved testing profile. Any mishap resulting in a serious injury or fatality, damage to property not associated with the licensed activity, or hazardous debris leaving the pre-defined hazard area, will be treated as a mishap and not test-induced damage, and will be subject to the reporting, response, and investigation requirements of § 450.173.

Several commenters expressed confusion about the effect of proposed § 450.175 on the part 450 licensing process. Boeing, Leo Aerospace, Lockheed Martin, Northrop Grumman, and ULA asked how test-induced damage would impact the licensing process. Boeing also commented that all planned test operations within the scope of a license should be assessed for public risk during the application process. Blue Origin asked what type of test is contemplated by ''test-induced damage,'' and if it would include tests conducted at a launch site with co-located test facilities, as opposed to integrated vehicle tests that traditionally happen at a launch site. Sierra Nevada and Microcosm commented that testing was outside the FAA's jurisdiction, and the proposed regulation should only apply to damage induced by a test performed under a license.

The test-induced damage exception set forth in § 450.175 only applies to license applicants or licensees seeking a mishap exception for test activities conducted during licensed activities. The test-induced damage exception is optional. To clarify that the test-induced damage exception is optional, the FAA adds paragraph (a) (Applicability), which states that § 450.175 only applies to license applicants or licensees who choose to pre-coordinate and apply for an optional test-induced damage exception. The FAA also replaces the word ''operator'' with the term ''license applicants or licensees'' to clarify that this provision is only available through the part 450 licensing process. Experimental permittees under part 437, by contrast, cannot seek to pre-coordinate test-induced damage with the FAA.

The exception does not apply to test activities that are not associated with FAA-licensed activities, nor to any activities outside FAA jurisdiction. The information submitted by the applicant will define the scope and type of test activities considered for test-induced damage. The FAA confirms that all planned test operations occurring during the scope of a license will be assessed for public safety risks. As stated in the FAA's ''Answers to Clarifying Questions Received by June 28, 2019,'' test-induced damage refers to damage expected to occur as part of a licensed activity approved by the FAA prior to the operation. An applicant must identify expected outcomes and potential risks associated with the proposed test activity. The FAA expects an applicant to identify potential failure outcomes and their consequences or risks, and plan for them appropriately. In order to except damage from becoming a mishap, the applicant needs to identify that potential damage to the

[185] The FAA removes proposed § 450.173(c) from the final rule and re-designates § 450.173(d) through (h) as § 450.173(c) through (g).

FAA. Unanticipated test damage may be excepted if it results from activities conducted within the scope of the FAA approval, and does not result in any of the events listed in § 450.175(b)(2).

To seek an exception, an applicant must submit the information listed in § 450.175(c) to the FAA in advance with sufficient time to evaluate the proposal. Although the FAA anticipates the amount of time required to evaluate an applicant's proposal will be minimal, the scope of review required will vary based on the proposed test activities and completeness of information provided.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended without explanation that the subheading for proposed § 450.175(a) be changed to, ''Coordination of risk of test-induced damage.'' The FAA declines to incorporate this recommendation, as it does not accurately describe the coordination set forth in § 450.175. The possibility of test-induced damage is assumed under § 450.175. Identification of potential risks associated with a testing activity is but one of the items applicants must submit to seek an exception under this section. The FAA agrees, however, that the proposed text was unclear, as the heading used the term, ''anticipated,'' which does not appear in § 450.175. Accordingly, the FAA revises the subheading for § 450.175(b) to clarify that operators would be coordinating ''potential,'' rather than ''anticipated,'' test-induced damage.

Boeing, Lockheed Martin, Northrop Grumman, and ULA also recommended, without explanation, that applicants be required to coordinate test-induced damage with any affected third parties or public authorities, in addition to the FAA. The FAA declines to incorporate this recommendation. Section 450.175 provides a process for license applicants and licensees to pre-coordinate with the FAA test-induced damage that would otherwise fall under the FAA's definition of ''mishap.'' The FAA is the only entity with whom coordination will be needed to seek exception from the FAA's ''mishap'' definition. It should be noted, however, that pre-coordination of test-induced damage under this section will not affect the duty of licensees to comply with all other requirements of their license, and with all other applicable laws and regulations.

In reference to what is now § 450.175(b)(2), Boeing recommended the FAA take into consideration insight gleaned from near-misses, noting that while a test may not have resulted in damage, the same anomaly could induce significant damage in a similar operational sequence. The FAA acknowledges the commenter's concern for the net effect of unreported anomalies but finds it unnecessary to change the regulatory text. Section 450.175 provides an exception to the ''mishap'' definition. Test-induced damage that exceeds the scope of FAA-approved activities will be treated as a mishap. It is possible for an anomaly to occur during pre-coordinated test activities. Any condition during licensed or permitted activity (including pre-coordinated test activity) that deviates from what is standard, normal, or expected during verification or operation of a system, process, facility, or equipment is an anomaly under § 401.7. Given that § 450.215 (Post-flight Reporting) requires operators to identify anomalies and corrective actions taken in response in their post-flight report, the FAA finds it will have notice of the ''near-miss'' anomalies referenced by the commenter.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended that proposed § 450.175(c) be made consistent with ground hazard analysis requirements in proposed § 450.185 or be deleted altogether. The FAA disagrees with this comment because the requirements of § 450.185 apply to the entire launch and reentry vehicle lifecycle, and are therefore much more comprehensive than the information requirements for test-induced damage. Imposing ground hazard analysis requirements would place an undue burden on applicants seeking a test-induced damage exception. Moreover, the test-induced paradigm is intended for the testing of a specific system, function, or component during licensed activities. As stated in the NPRM, the test-induced damage exception is not available for the operation of an entire vehicle, but rather the testing of specific components and systems. Lastly, unlike the ground hazard analysis requirements, the information requirements of § 450.175(c) only apply to applicants seeking a mishap exception for damage resulting from specific test activities taking place within a defined time-period, as coordinated with and approved by the FAA.

pp. Unique Safety Policies, Requirements and Practices (§ 450.177)

In the NPRM, the FAA proposed requirements under § 450.177 for operators to implement unique policies, requirements, and practices needed to protect the public health and safety, safety of property, and the national security and foreign policy interests of the United States. Proposed § 450.177(a) would require an operator to review operations, system designs, analysis, and testing, and to identify any unique launch or reentry hazards not otherwise addressed by proposed part 450. Proposed § 450.177(b) would provide that the FAA may identify and impose a unique policy, requirement, or practice, as needed, to protect the public health and safety, safety of property, and the national security and foreign policy interests of the United States.

In the final rule, the FAA adopts § 450.177 (Unique Safety Policies, Requirements and Practices) with two revisions. For the reasons discussed below, the FAA removes the references to property protection and national security and foreign policy interests of the United States, and adds ''safety'' to the section title.

CSF, Sierra Nevada, and Spaceport Strategies commented that proposed § 450.177(b) expanded regulatory uncertainty by allowing the FAA to impose new requirements when needed to protect public health and safety, safety of property, and national security or U.S. foreign policy interests. CSF noted that part 417 previously allowed the FAA to impose new requirements when needed ''to protect the public.'' CSF and Sierra Nevada commented that proposed § 450.177(b) expanded the FAA's ability to impose requirements on an operator outside of regulatory process even if the operator met all other criteria. The commenters suggested that the ability to impose unknown requirements as a result of innovation will adversely impact costs and could have a chilling effect on innovation and investments in U.S. space industries if the FAA's discretion under proposed § 450.177 was unbounded. They further contended that the proposed requirement would give the FAA discretion to impose new requirements ''as-needed'' and result in no cost savings. CSF also expressed concern that such requirements could be inequitably imposed on a singular licensee or disparately among licensees developing similar technologies or operational approaches. CSF recommended the FAA be required to collaborate with the operator or with industry before requiring a unique policy, rule, or practice. CSF and Sierra Nevada recommended the rule be bounded to limit the scope and timeline for the FAA to impose restrictions, and give applicants due process.

The FAA agrees that it is unnecessary to include hazards to the national security and foreign policy interests of the United States under this section because those considerations are adequately covered under policy and

payload reviews in part 450. In the final rule, the FAA removes ''national security and foreign policy interests of the United States'' from § 450.177(b) and (c)(2).

In the final rule, the FAA also removes ''safety of property'' from § 450.177(b) and (c). As explained in other parts of this preamble, the FAA is retaining in the final rule only specific requirements for property protection (*e.g.* critical assets, property on orbit), which have specific safety criteria. Operators may be required to mitigate hazards to property through emergency response requirements in § 450.173(d), but otherwise, the FAA declines to impose a more specific property protection requirement at this time. Removal of the references to property protection and national security and foreign policy interests largely dispenses with the commenters' concerns that § 450.177 would expand the scope of § 417.127. Although the final rule retains the provision in § 450.177(b) regarding FAA's ability to impose a unique requirement, policy, or practice needed to protect public health and safety, the FAA does not foresee a substantive change for operators from § 417.127, which provides that FAA may impose such unique requirements as needed to protect the public.

The FAA's authority to impose a unique requirement, policy, or practice is bounded, as it is in § 417.127, by the FAA's statutory authority to protect public health and safety. The FAA understands the concern expressed by Spaceport Strategies and others that the imposition of unique policies, requirements, or practices deemed necessary by the FAA to protect public health and safety has the potential to impose additional costs on the operator. However, given the rarity of the FAA's invocation of § 417.127, and the prosperity of today's commercial space industry under part 417, the FAA does not foresee any additional costs to operators or a chilling of innovation resulting from § 450.177.

Moreover, as discussed in the NPRM preamble, the necessity for § 450.177 is the same as that for § 417.127: The FAA expects that advances in technology and implementation of innovations by launch and reentry operators will likely introduce new and unforeseen safety challenges. These advances and innovations can present regulatory challenges that are unforeseen in existing regulations. In this case, the FAA must work with operators on a case-by-case basis to identify and mitigate those unique hazards posed to public health and safety, which are not addressed by part 450. The FAA expects the need for the use of this provision to be rare, as has the need to use § 417.127, due to the comprehensiveness and performance-based nature of part 450. In the rare instance that it is used, the FAA will work with the operator to reach a mutually satisfactory solution that allows the activity while protecting public health and safety, but the FAA declines to require collaboration in the regulation, as CSF suggests.

qq. Ground Safety (§ 450.179 to § 450.189)

i. Ground Safety General (§ 450.179)

In the NPRM, the FAA proposed that an operator would be required to protect the public from the adverse effects of hazardous operations and systems associated with preparing a launch vehicle for flight, returning a launch or reentry vehicle to a safe condition after flight, or after an aborted launch attempt, and returning a site to a safe condition.

In the final rule, the FAA adopts § 450.179 with revisions.[186] This final rule moves proposed subsections (b) and (c) to § 450.179(a)(1) through (3) and adds new subsections (b) and (c). These additions are discussed in more detail in the preamble section addressing Launch and Reentries from a Federal Launch or Reentry Site.

ii. Coordination With a Licensed Launch or Reentry Site Operator (§ 450.181)

In the NPRM, the FAA proposed that an operator would be required to coordinate with site operators as both entities have public safety obligations during ground operations. Operators would be required to coordinate with site operators to ensure that access to public sites is controlled and prevent unsafe interference of ground hazards. For a launch or reentry conducted from or to an FAA licensed site, an operator would be required to coordinate mishap reporting, response, and investigations with the site operator for any mishap during ground activities at the site.

In the final rule, the FAA adopts § 450.181 as proposed with two exceptions. In § 450.181(a)(3), the ground hazard areas must be coordinated with a site operator during the designation of those ground hazard areas. In the final rule, the FAA changes the language used to describe this coordination to ''[t]he designation of any ground hazard area that affects the operations of a launch or reentry site is coordinated with the Federal or licensed launch or reentry site operator.'' This amended language is a minor grammatical change and is consistent with the intent of the proposed requirement. In addition, proposed § 450.181(a)(4) required an operator to coordinate with a site operator to ensure, in part, prompt and effective response in the event of a mishap that could impact ''public safety.'' In the final rule, the FAA changes this phrasing to require that a prompt and effective response ''is undertaken'' in the event of a mishap that could impact ''the safety of the public and property.'' The FAA changes ''public safety'' to ''the safety of the public and property'' in the final rule because, as discussed earlier in this preamble, property was removed from the definition of ''public.'' Thus, the FAA makes this wording change to keep the requirement equivalent to what was proposed. The FAA adds ''is undertaken'' as a minor grammatical change that is consistent with the intent of the proposed requirement.

Sierra Nevada commented that proposed § 450.181 seems to be duplicative of proposed § 450.147 (Agreements) and thus should be removed. While agreements made with a Federal or licensed site operator may satisfy the requirements of § 450.181, the FAA finds the requirement to coordinate with a site operator specifies what coordination must be in place to prevent unsafe interference among users of a site and ensure clear lines of responsibility for related aspects of public safety. The FAA concurs that an applicant may be able to show compliance with both requirements by providing an agreement that shows compliance with the specific criteria in § 450.181. However, the two requirements are different and intentionally separate. Specifically, § 450.181 provides additional detail about coordination that is necessary for public safety because improperly coordinated neighboring operations that occur on or near the launch site have the ability to create hazards to the public. In addition, the agreement required by § 450.147 is not an application deliverable, whereas § 450.181 requires an application deliverable. Accordingly, the FAA adopts both §§ 450.181 and 450.147.

Denver International Airport commented that, although it supported the proposed requirements for

[186] Proposed § 450.179 required an operator at a U.S. launch or landing site to protect the public from adverse effects of hazardous operations and systems. The FAA changed ''protect the public'' to ''protect the public and property'' in the final rule. This change is because, as discussed earlier in this preamble, property was removed from the definition of ''public.'' Thus, ''property'' was added to this section to keep the requirement equivalent to what was proposed.

coordination with site operators, these requirements were too narrow to keep site operators and surrounding communities properly informed. Denver International Airport also commented that operators should be required to coordinate on launch and reentry activities and mishaps with a wider group of interested and affected stakeholders, including first responders and local governments. Similarly, AAAE proposed that licensed operators be required to notify contingent landing sites and nearby airports of safety hazards, including providing them with the ground safety hazard analysis. AAAE suggested such notifications could be accomplished as part of the notifications required in proposed § 450.147 or as part of a broader public disclosure.

The FAA notes that the notification requirements in § 420.57 require licensed site operators to notify local officials and adjacent landowners of flight schedules. In addition, § 450.147 requires vehicle operators to have agreements with any sites or services that are necessary to meet the safety requirements for a license. These requirements serve to notify the necessary entities about licensed operations. Including notification requirements beyond those in §§ 420.57 and 450.147 is outside the needs of this rulemaking to protect public health and safety, safety of property, and national security and foreign policy interests of the United States.

Boeing, Lockheed Martin, Northrop Grumman, and ULA recommended the FAA revise proposed § 450.181(a)(3) to require only that coordination ensure that any ground hazard areas are identified. The FAA does not find the commenters' recommendation sufficient to protect public safety and avoid adverse impacts on neighboring space operations. The vehicle operator must take an active role in ensuring the site operator is aware of ground hazard areas and how they may impact other site operations.

iii. Explosive Site Plan (§ 450.183)

In the NPRM, the FAA proposed to require an applicant to include an explosive site plan as part of its vehicle operator license application for a launch or reentry from or to a site exclusive to its own use. This plan would be required to demonstrate compliance with the explosive siting requirements in part 420.

In the final rule, the FAA adopts § 450.183 (Explosive Site Plan) as proposed. The FAA received no comments on this section.

iv. Ground Hazard Analysis (§ 450.185)

In the NPRM, the FAA proposed an operator would be required to complete a ground hazard analysis that would include an assessment of the launch or reentry vehicle, the launch or reentry integrated systems, ground support equipment, and other site hardware. In its analysis, an applicant must identify hazards; include a risk assessment; and identify and describe mitigations, controls, and provisions for hazard control verification and validation. Although the analysis might incorporate aspects of employee safety and mission assurance, an applicant would only be required to identify the hazards that affect the public and describe how those hazards are mitigated.

In the final rule, the FAA adopts § 450.185 as proposed, with minor edits to remove the reference to ''public property'' because ''property'' has been removed from the final rule's definition of ''public,'' as discussed in the preamble section for Neighboring Operations Personnel. Instead, the FAA refers to ''property not associated with the launch or reentry.''

In response to the proposed requirements, NFPA suggested its own standards as guidance for complying with proposed §§ 450.179, 450.185, and 450.189. Space Florida also commented that the FAA did not provide clear guidance on what standards would be acceptable and how the agency would judge the sufficiency of the ground hazard analysis. Space Florida did not recommend a specific change to proposed § 450.185.

In response to NFPA's comment, the FAA notes that applicants are free to explore the use of any industry standard to demonstrate compliance with these sections. If the industry standard has not already been accepted by the FAA, the FAA would review the proposed standard as part of an applicant's application. NFPA is also welcome to submit its standards to the FAA for acceptance at any time.

In response to Space Florida, the FAA recommends that the applicant identify proposed standards and common practices during pre-application consultation to reach an agreement with the FAA on their applicability for proposed operations. For items that may deviate from current standards and practices, the FAA may seek additional justification or analysis to determine whether ground hazards pose a risk to public safety.

Virgin Galactic asked the FAA to retain the ground safety analysis practices used under part 431 and not to impose proposed § 450.185. Virgin Galactic also asked that existing launch vehicles be ''grandfathered.'' Finally, Virgin Galactic commented that conducting a ground hazard analysis would place a cost burden on hybrid vehicle operators and asked the FAA to outline its reasoning for imposing the requirement on hybrid operators.

The FAA discusses Virgin Galactic's question regarding cost burden in the preamble section addressing Responses to Regulatory Impact Analysis Comments. Part 431 does not have an explicit ground safety requirement, and as a result it is often difficult for applicants to ascertain how to meet the safety standard for pre-flight operations. Concurrently, the ground safety requirements in part 417 are overly prescriptive and onerous. The ground hazard analysis requirements in part 450 strike a balance between the two parts, providing additional guidance to applicants, while at the same time preserving flexibility.

An operation that was licensed prior to the effective date of this rulemaking will be permitted to continue under its license for five years from the effective date or when the license expires if the operator does not seek a renewal. For further discussion, please see the preamble section on Legacy Licenses. All regulated operators, including hybrid launch or reentry systems operators, will need to prepare a ground hazard analysis to ensure public safety is protected. Hybrid launch or reentry vehicles may still pose a risk to the public; therefore, the FAA imposes its ground hazard analysis requirements on hybrid launch vehicles in order to identify and mitigate those risks. Some launch or reentry systems will have very limited ground hazards, and thus the ground hazard analysis will be similarly limited. An operator would not need its ground hazard analysis to include carrier aircraft activities that do not constitute launch or reentry.[187]

Boeing, Lockheed Martin, Northrop, and the ULA recommended the FAA modify proposed § 450.185(a) by adding that a ground hazard analysis must identify system and operation hazards posed by the vehicle ''and any of its components.'' The FAA does not adopt this change because any requirement levied on the vehicle also necessarily includes the vehicle's components.

CSF, Sierra Nevada, and Space Florida recommended that the FAA consider an alternative regulatory approach giving site operators more

[187] Such activities may include, for example, activities conducted by a carrier aircraft without a rocket attached when the carrier aircraft plus rocket constitutes the launch vehicle.

authority over ground safety. Specifically, CSF and Sierra Nevada recommended that the FAA consider an alternative regulatory approach that would give the responsibility for assessing and controlling ground safety and hazards mitigations to the site operator.

Historically, the launch or reentry operator has been responsible for ground safety and, as reflected in the NPRM, the FAA determined that this allocation of responsibility was appropriate given that the operator has the most comprehensive understanding of the parameters of the licensed activity. The FAA expects that the launch or reentry operator will work closely with the site operator to ensure all requirements are met. Accordingly, the FAA retains the proposed language in the final rule.

v. Ground Safety Prescribed Hazard Controls (§ 450.189)

In the NPRM, the FAA proposed that an operator would be required to implement certain prescribed hazard controls during the ground operations period of launch or reentry. These prescribed hazard controls would require that an operator document how it would protect members of the public who enter areas under the operator's control, and mitigate hazards created by a countdown abort. They would also require the operator to establish plans for controlling fires and emergency procedures. In the final rule, the FAA adopts § 450.189 as proposed.

AAAE suggested licensed operators be required to notify nearby airports and contingent landing sites of potential safety hazards and their controls, including those described under this section and proposed § 450.185. The notification requirements in § 420.57 require licensed site operators to notify local officials and adjacent landowners of flight schedules. In addition, § 450.147 requires vehicle operators to have agreements with any sites or services that are necessary to meet the safety requirements for a license. These requirements serve to notify the necessary entities about licensed operations.

5. Part 450 Subpart D—Terms and Conditions of a Vehicle Operator License

a. Public Safety Responsibility, Compliance With License, Financial Responsibility, Human Spaceflight Requirements (§§ 450.201 to 450.207)

In the NPRM, the FAA proposed requirements addressing how a licensee is responsible for ensuring public safety and safety of property during the conduct of a licensed launch or reentry in proposed § 450.201, how a licensee would be required to comply with a license in proposed § 450.203 (Compliance with License), with financial responsibility requirements of part 440 in proposed § 450.205 (Financial Responsibility Requirements), and with human spaceflight requirements in part 460 in proposed § 450.207 (Human Spaceflight Requirements).

In the final rule, the FAA adopts the requirements as proposed. The FAA received no comments on these proposals.

b. Compliance Monitoring (§ 450.209)

In the NPRM, the FAA proposed to combine the compliance monitoring requirements of §§ 417.23 and 431.83 in § 450.209. The FAA also proposed to allow an operator the option to provide the FAA with means other than a console for monitoring the communication and countdown channels. The compliance monitoring requirements of proposed § 450.209 would apply to all launch and reentry operations. Finally, proposed § 450.209 codified the FAA practice for conducting compliance monitoring of part 435 operations. In final rule, the FAA adopts § 450.209 as proposed.

Virgin Galactic expressed concern regarding proposed § 450.209(b), which stated a licensee must provide the FAA with the capability to communicate with the mission director. Virgin Galactic suggested replacement language that gave the operator the responsibility for assigning a radio communications point-of-contact for the FAA during operations. The FAA does not adopt this suggestion because the FAA must have direct contact with the mission director during licensed operations to ensure any risk to public safety during ongoing operations is immediately addressed. It will continue to be FAA practice not to contact the mission director unless there is an immediate and urgent risk to public safety.

The FAA also deletes § 450.209(c) because it imposed a requirement only on the FAA and was unnecessary legacy language.

c. Continuing Accuracy of License Application; Application for Modification of License (§ 450.211)

In the NPRM, the FAA proposed to preserve the continuing accuracy requirements in §§ 417.11 and 431.73, and consolidate them in proposed § 450.211. In addition, the FAA proposed to allow an applicant to request approval of an alternate method for requesting license modifications during the application process.

In the final rule, the FAA adopts § 450.211 as proposed with only a minor revision to split the second requirement in proposed § 450.211(a) into a new § 450.211(b). Accordingly, proposed § 450.211(b) and (c) were renumbered to become § 450.211(c) and (d) in the final rule, respectively.

CSF and SpaceX suggested that the FAA could update § 413.17(a) to clarify that it would agree to a modification to an existing license when the FAA accepts and approves a continuing accuracy submission. CSF requested that the FAA clarify its use of these terms in an AC.

Virgin Galactic noted that operators may have separate definitions for continuing accuracy and license modifications. Virgin Galactic proposed what it believed to be simpler requirements for continuing accuracy updates and license modifications, which in Virgin Galactic's experience aligned with how the FAA has processed Virgin Galactic's license and license application updates over the past three years. Specifically, Virgin Galactic recommended that proposed § 450.211(a)(1) be rewritten to change the requirement so that after a license has been issued, a licensee would be required to apply to the FAA for modification of the license if the licensee proposes to make changes that affect the license, as issued by the FAA. It also proposed to add the term ''continuing accuracy updates'' for changes that a licensee proposes that do not affect the license but do affect the license application. Virgin Galactic maintained that this approach would provide schedule assurance for operators, as license modification usually involves time-intensive coordination between the FAA and an operator.

Sierra Nevada commented that general edits to the listed documents should not trigger the requirement of continuing accuracy, as such a requirement would create an extremely burdensome amount of document overhead an applicant would be required to maintain that is not necessary for maintaining public safety.

The FAA does not agree that the suggested changes are necessary; however, the FAA has split the two requirements in § 450.211(a) so that the application for modification of license is in § 450.211(b) for added clarity. The regulation states that a licensee is responsible for the continuing accuracy of representations contained in its application. A license modification is

required only if the licensee proposes to conduct a launch or reentry in a manner not authorized by the license; or, if any representation contained in the license application that is material to public health and safety or the safety of property is no longer accurate and complete, or does not reflect the licensee's procedures governing the actual conduct of a launch or reentry. For representations that do not meet either of these criteria, such as administrative information, § 450.211(b) continues to require an applicant to inform the FAA of the change in order to ensure the representations made in the application are accurate.

The NPRM preamble identified the following as areas that constitute a material change: Reuse, after an earlier launch or reentry, of safety-critical systems or components, requiring refurbishment, re-qualification testing, and re-acceptance testing. Virgin Galactic believed performing refurbishment and pre-flight testing of reusable safety-critical systems or components would not constitute a material change that affects public safety. Both vehicles of a hybrid RLV launch system are reused, and pre-flight testing and refurbishment are performed prior to each mission. Virgin Galactic recommended this reuse language be stricken from the preamble because it is not a material change to public safety.

The FAA clarifies that normal pre-flight testing and refurbishment that are evaluated and accepted during a license application are not considered a material change. The FAA further clarifies that only pre-flight testing and refurbishment that is not evaluated during a licensing process will be considered a material change. As discussed above, a material change is a change that affects public safety that has not been evaluated and authorized by the FAA during the licensing process.

Virgin Orbit commented that some of the changes noted in preamble, such as retesting a valve or changing a safety officer, should not require a modification to a license. Virgin Orbit recommended that what constituted a material change should be based on how the change affected public safety elements contained within the FSA and PSA. Virgin Orbit further recommended that the FAA allow operators to determine how the areas that constituted a material change as identified in the preamble affected the public safety elements.

As noted earlier, a material change is a change that affects public safety that has not been evaluated and authorized by the FAA during the licensing process. These changes may go beyond just the FSA and any PSA [188] as suggested by Virgin Orbit. All public safety requirements in part 450 are applicable. The FAA does agree with Virgin Orbit that the burden lies on the operator to determine what constitutes a material change. The FAA notes, however, that an operator should consult with the FAA regarding those changes for which an operator is unsure whether the change is material or not.

Virgin Orbit requested a definition of a ''minor'' change. It further requested that minor changes would not require a full 180-day review period, and that the regulation define a maximum review time for minor changes. The FAA does not distinguish between major and minor changes, only those changes that will or will not have a material impact on public safety. Categorizing all potential changes that have a material impact on public safety into only two categories is problematic due to the variety of potential changes. The FAA does agree, however, that not all requests for modification would require extensive review. Although the statutory 180-day review period does not apply to modifications, the FAA makes every effort to act upon all requests for modifications in a timely manner. The FAA is able to respond quickly if a change is indeed minor.

d. Pre-Flight Reporting (§ 450.213)

In the NPRM, the FAA proposed to require a licensee to provide the FAA with the following information prior to each launch or reentry: Mission-specific information, FSA products, FSS test data, data required by the FAA to conduct a collision avoidance analysis, and a launch or reentry schedule.

In the final rule, the FAA adopts § 450.213 with four revisions. First, in § 450.213(d)(2), the FAA replaces the term ''flight information'' with ''planned mission information'' because the information required includes launch site information, and the term ''planned mission information'' is used in the final § 450.208(d)(6). Second, the FAA revises § 450.213(d) to allow an operator the flexibility to identify an appropriate time frame in coordination with the FAA. Third, in § 450.213(e) the FAA removes the reference to the time frames to submit LCOLA data, which the FAA has revised in the final rule, so that § 450.213(e) simply requires operators to submit LCOLA data in accordance with § 450.169(f). Lastly, the FAA replaces ''operator'' with ''licensee'' throughout the section to be consistent with the rest of subpart D. The FAA makes similar changes in § 450.450.215.

Boeing, Lockheed Martin, Northrop Grumman, and ULA commented that they appreciated the streamlining of pre-flight reporting. CSF recommended that the FAA allow the submittal of test reports in accordance with proposed § 450.213(d) less than 30 days before flight. SpinLaunch also stated that the proposed § 450.213(d) requirement to submit test reports 30 days prior to launch was too burdensome.

The FAA agrees that not all test reports for the FSS, such as end-to-end tests and pre-flight tests, can be delivered 30 days before flight. The FAA therefore revises § 450.213(d) to allow an operator the flexibility to identify an appropriate time frame in coordination with the FAA. The FAA discusses this flexibility in more detail in the preamble section on Time Frames.

AAAE noted that, under proposed § 450.213(f), launch schedules would be required to be provided to the FAA in advance. AAAE recommended that these schedules, including any changes to the schedule, should also be distributed to nearby airports (within at least five nautical miles of the launch site or along the vehicle's trajectory), contingent landing sites, and any emergency responders supporting the launch operation.

The FAA declines to adopt this recommendation. Section 450.147 requires that an operator establish written agreements with any entity that provides a service that meets a requirement. The FAA notes that these written agreements will include any agreements necessary to ensure the safety of airspace. The FAA has drafted § 450.147 to be as performance-based as possible; therefore, the specificity recommended by AAAE is unnecessary. That said, the FAA agrees that such notifications would usually be required.

CSF noted that proposed § 450.213 would require that the licensee provide payload details to the FAA 60 days in advance of a launch or reentry. CSF commented that operators often cannot meet that time frame due to changes in manifests for passive or minor payloads that occur inside of 60 days before flight. Proposed § 404.15 would not allow an operator to request that the time frame for payload notification be changed unless it knew more than 60 days in advance of flight that the manifest was going to change. CSF considered the proposal inflexible and requested that FAA allow proposed § 404.15 be made more flexible. The FAA disagrees with the comment, as § 404.15 currently allows for an

[188] As discussed earlier, the FAA removed the requirement for a PSA from the final rule.

applicant to request the FAA to relax the 60-day pre-flight reporting requirement for payload information.

e. Post-Flight Reporting (§ 450.215)

In the NPRM, the FAA proposed an operator be required to provide the actual trajectory flown by the vehicle and, for an unguided suborbital launch vehicle, the actual impact location of all impacting stages and impacting components, if requested by the FAA. In the final rule, the FAA adopts § 450.215 as proposed.

SpaceX generally agreed with the provisions of proposed § 450.215 but suggested that the FAA remove proposed § 450.215(b)(4) because it contended that post-flight auditing was already an option for the FAA and that the specific reference to a potential request for a flown trajectory was redundant and unnecessary. Although the FAA agrees with SpaceX that the FAA can request these data as part of its inspection, the FAA finds that the explicit reference in the regulatory text is necessary to ensure compliance. The FAA included this requirement in the proposed rule because some operators failed to provide flown trajectory information when the FAA requested it as part of an inspection or post-flight review. The FAA will only ask for flown trajectory data when necessary to verify models and assess vehicle performance.

f. Registration of Space Objects (§ 450.217)

In the NPRM, the FAA consolidated and updated the requirements for registration of space objects in proposed § 450.217. The FAA proposed to remove the caveat excluding foreign payloads and to add the requirement to notify the FAA when removing objects placed in orbit. The FAA noted that it is the responsibility of the U.S. Government to register objects and launch operator data is used to make relevant decisions on what to register. Proposed § 450.217(c) retained § 431.85's requirement that an operator notify the FAA when it removes a space object.

In the final rule, the FAA adopts § 450.217 as proposed.

NZSA asked if operators would have to report the reentry of an object due to atmospheric reentry, presumably much later than launch. NZSA supported the requirement of information on foreign-owned space objects to determine who would register the objects, which NZSA also requires. NZSA recommended the FAA clarify whether removal would relate only to active removal or if it would include passive deorbiting. NZSA viewed the latter to be in alignment with the terms of the Registration Convention.[189]

The FAA did not intend the requirement to notify the FAA of objects removed from orbit to cover eventual decays through atmospheric reentry. NZSA is correct that the Registration Convention requires the notification of objects removed from space. Yet, the FAA does not believe there is a need to require launch operators to track the orbital status of all objects previously launched in perpetuity.

6. Changes to Parts 401, 413, 414, 420, 433, 437, and 440

Part 401—Organization and Definitions

i. § 401.5

In the NPRM, the FAA proposed new and amended definitions to § 401.5 (Definitions). The new proposed definitions in proposed § 401.5 were: ''anomaly,'' ''casualty area,'' ''command control system,'' ''control entity,'' ''countdown,'' ''critical asset,'' ''crossrange,'' ''data loss flight time,'' ''deorbit,'' ''disposal,'' ''dose-response relationship,'' ''downrange,'' ''effective casualty area,'' ''expected casualty,'' ''explosive debris,'' ''flight abort,'' ''flight abort crew,'' ''flight abort rules,'' ''flight hazard area,'' ''flight safety limit,'' ''gate,'' ''hazard control,'' ''launch or reentry system,'' ''launch window,'' ''liftoff,'' ''limits of a useful mission,'' ''mishap, class 1,'' ''mishap, class 2,'' ''mishap, class 3'', ''mishap, class 4,'' ''neighboring operations personnel,'' ''normal flight,'' ''normal trajectory,'' ''operating environment,'' ''operation hazard,'' ''orbital insertion,'' ''physical containment,'' ''probability of casualty,'' ''public,'' ''reentry window,'' ''service life,'' ''software function,'' ''sub-vehicle point,'' ''system hazard,'' ''toxic hazard area,'' ''tracking icon,'' ''uncontrolled area,'' ''unguided suborbital launch vehicle,'' ''uprange,'' and ''vehicle response modes,'' ''wind weighting safety system,'' and ''window closure.''

The amended definitions in proposed § 401.5 were ''contingency abort,'' ''flight safety system,'' ''instantaneous impact point,'' ''launch,'' ''mishap,'' ''reenter; reentry,'' ''safety critical,'' and ''State and United States''. These new and revised definitions were necessary additions to accompany the proposed part 450 requirements.

The FAA also proposed to remove a number of definitions from § 401.5 that were no longer used in the regulations: ''emergency abort,'' ''human space flight incident,'' ''launch accident,'' ''launch incident,'' ''public safety,'' ''reentry accident,'' ''reentry incident,'' and ''vehicle safety operations personnel.''

In the final rule, the FAA does not make any immediate changes to § 401.5. Instead, § 401.5 will remain in effect for five years after the effective date of this final rule, and its definitions will be applied to parts 415, 417, 431, and 435. After five years, § 401.5 will be removed from part 401 and all operators will use the definitions in the new § 401.7.

ii. § 401.7

In the final rule, existing and proposed definitions from § 401.5 are adopted as new § 401.7 (Definitions) specifically applicable to part 450 requirements, with the exception of the following proposed definitions: ''control entity,'' ''data loss flight time,'' ''dose-response relationship,'' ''flight abort crew,'' ''gate,'' ''mishap, class 1,'' ''mishap, class 2,'' ''mishap, class 3'', ''mishap, class 4,'' ''tracking icon,'' and ''vehicle response modes.'' In addition, § 401.7 does not contain the definitions for ''Federal launch range'' and ''launch site safety assessment'' that exist in § 401.5. These definitions are not adopted because they are no longer used in the regulations. Section 401.7 will apply to all of Chapter III except parts 415, 417, 431, 435, and 440, where § 401.5 will continue to apply until five years after the effective date of this rule.

The FAA notes that the proposed definition of ''probability of casualty'' uses the phrase ''serious injury or worse.'' Consistent with current practice for launch and reentry safety analyses, as well as other DOT modal administrations, the FAA maintains that the use of the Abbreviated Injury Scale (AIS) Level 3 or greater (of the Association for the Advancement of Automotive Medicine) is appropriate for describing a medical condition sufficiently to allow modeling of casualties for purposes of determining whether a launch or reentry satisfies the public risk criteria. For additional information regarding casualty modeling, the FAA refers the reader to the preamble of a previous rulemaking.[190]

The FAA adds new definitions for ''critical payload,'' ''hazardous debris,'' ''key flight safety event,'' and ''useful mission,'' which were not proposed in the NPRM. These definitions and the rationale to remove, adopt, or amend them are discussed in the relevant topic sections of this preamble.

Sierra Nevada suggested including a specific reference to ground safety for

[189] Convention on Registration of Objects Launched into Outer Space provides that the United Nations maintains a registry of objects left in space by on data provided by the launching state.

[190] *See* 67 FR 49464 (July 30, 2002).

the public in the definition of ''reentry.'' The FAA declines to adopt this suggestion because public safety is the core of the FAA's statutory mission, and including additional reference to public safety for the definition of ''reentry'' is unnecessary.

Part 413—Application Procedures

In the NPRM, to enable incremental application submission and review, the FAA proposed to modify § 413.1 to clarify the term ''application'' to mean either an application in its entirety, or a portion of an application for incremental review and determination in accordance with proposed § 450.33.

In the final rule, the FAA adopts the provision as proposed. This decision is further discussed in the Incremental Review section of the preamble. The FAA did not receive any comments on this part.

In the NPRM, the FAA proposed to revise the table in § 413.1 by replacing parts 415, 417, 431, and 435, with part 450. The FAA adopts the proposed table with revisions as discussed in the preamble section for Compliance Period for Legacy Licenses.

In the NPRM, the FAA proposed to amend § 413.7(a)(3) to allow an applicant the option to submit its application by email as a link to a secure server and removed the requirement that an application be in a format that cannot be altered. The FAA adopts § 413.7(a)(3) as proposed and this decision is further discussed in the Application Process section of the preamble.

In the NPRM, the FAA proposed to revise § 413.11(a) by removing the reference to initiate a review ''required to make a decision about the license or permit.'' This revision would enable incremental application submission and review. In the final rule, the FAA adopts the change as proposed.

In the NPRM, the FAA proposed a change to § 413.15 to allow the FAA to establish a time frame for any incremental review with an applicant on a case-by-case basis during pre-application consultation. In the final rule, the FAA adopts this change with a revision. The FAA revises the explicit time frames in § 413.15 to reference the time frames specified in 51 U.S.C. 50905(a)(1) and 50906(a) so that a future rulemaking will not be required if the time frames are modified in the statute. This decision is further discussed in the Incremental Review section of the preamble.

In the NPRM, the FAA proposed to correct the section heading of § 413.21 to reflect the content of the section, and to correct § 413.21(c) to reference both license and permit applications. The FAA adopts these changes as proposed.

In the NPRM, the FAA included license and permit renewals in the flexible time frames table in Appendix A to Part 404. The FAA inadvertently omitted making the same change in the corresponding regulatory text in § 413.21. The FAA adopts the change as proposed, and revises § 413.21 to allow flexible time frames for license and permit renewals. This decision is further discussed in the Time Frames section of the preamble.

In the NPRM, the FAA proposed conforming changes in part 413 where a part 414 safety approval is referenced, to change those references to ''safety element approval.'' The FAA adopts the changes as proposed. This decision is further discussed in the Safety Element Approval section of the preamble.

Part 414—Safety Element Approvals

In the NPRM, the FAA proposed to change the part 414 term ''safety approval'' to ''safety element approval,'' to distinguish it from the term ''safety approval'' as used in parts 415, 431, and 435, and proposed part 450. Also, the FAA proposed to modify part 414 to enable applicants to request a safety element approval in conjunction with a license application in accordance with proposed part 450.

In the final rule, the FAA adopts the changes as proposed with minor editorial corrections. The FAA did not receive any comments on this part.

Part 420—License To Operate a Launch Site

In the NPRM, the FAA proposed multiple changes in part 420. Specifically, the FAA proposed changes in §§ 420.5, 420.15, 420.51, 420.57, 420.59, and 420.61 to align with requirements in part 450.

In § 420.5, the FAA proposed to remove the definitions of ''instantaneous impact point,'' ''launch site accident,'' and ''public'' from § 420.5. The FAA did not receive comments on these changes and adopts them as proposed.

In § 420.15(b), the FAA proposed to revise the environmental review requirements under part 420 to match the environmental review requirements proposed in § 450.47. As discussed in the Environmental Review section of this preamble, the FAA adopts this change as proposed, with revisions that affirmatively state the responsibilities of the FAA and an applicant in accordance with FAA Order 1050.1.

The FAA proposed a minor edit to § 420.51, and proposed to allow alternate time frames in § 420.57. The FAA adopts these changes as proposed.

In § 420.59, the FAA proposed changing the heading from ''Launch Site Accident Investigation Plan'' to ''Mishap Plan,'' and modifying the requirements for Mishap Plans to match the requirements for ''mishap plans'' in § 450.173. As discussed in the Mishap section of this preamble, the FAA revises § 420.59(a) to state that the requirements of this section only apply in the event of a mishap that meets paragraph (a)(1) or (a)(5) of the definition of ''mishap'' in § 401.7 and removes the requirement for the licensee to cooperate with an FAA or NTSB investigations of a mishap for launches launched from the launch site.

Lastly, in § 420.61(b), the FAA replaces the word ''shall'' with the word ''must,'' and replaces the term ''launch or launch site accident'' with a reference to the portions of the ''mishap'' definition that replace this term: paragraphs (1), (5), and (8). As explained in the Mishap section of this preamble, the NPRM inadvertently omitted these changes necessitated by the revised definition of ''mishap'' in § 401.7.

Part 433—License To Operate a Reentry Site

In the NPRM, the FAA proposed changes to the environmental requirements in § 433.7 to align them with the environmental requirements in proposed § 450.47 and removed and reserved § 433.9.

In the final rule, the FAA adopts the proposed requirements in § 433.7 with revisions to align with the revisions in § 450.47. The revisions are discussed in the Environmental Review section of the preamble. The FAA also adopts the proposal to remove and reserve § 433.9. The FAA did not receive any comments on these proposals.

Part 437—Experimental Permits

In the NPRM, the FAA proposed the following changes to part 437 (Experimental Permits).

- First, the FAA proposed to remove the definition of ''anomaly'' from § 437.3 and include a modified version in proposed § 401.5.
- Second, the FAA proposed to modify the environmental requirements in § 437.21(b)(1) to match the environmental requirements proposed in § 450.47.
- Third, the FAA proposed to change the name of ''safety approval'' to ''safety element approval'' in § 437.21.
- Fourth, the FAA proposed to modify the mishap plan requirements in § 437.41 to require that they meet the

requirements of proposed § 450.173 and remove and reserve the requirements in § 437.75.

• Fifth, the FAA proposed to change the requirements in § 437.65 for collision avoidance to match proposed § 450.169.

• Finally, the FAA proposed allowing for alternate time frames for pre-flight reporting in § 437.89.

In the final rule, the FAA adopts the proposed requirements with the following exceptions. The FAA revises the environmental requirements in § 437.21 to align with § 450.47, and replaces the word ''envelope'' with the word ''scope.'' ''Scope'' more accurately captures ''envelope, parameter, or situation'' as used in the definition of ''safety element approval.'' The rationale for this revision is discussed in the Environmental Review section of the preamble. The FAA also aligns the recordkeeping requirements in § 437.87(b) for an event that meets paragraph (a)(1) through (a)(3), (a)(5), or (b)(3) of the definition of ''mishap'' in § 401.7, for which a permittee must preserve all records related to the mishap event. The FAA removes the definition of ''anomaly'' from § 437.3 and includes a revised definition of ''anomaly'' in § 401.7 instead of in § 401.5 as proposed. The FAA also amends the language in § 437.87(b) to state that records must be retained until completion of any Federal investigation and the FAA advises the permittee that the records need no longer be retained. These changes will clarify the records retention requirements and ensure consistency with part 450. The changes do not modify the scope of the requirements. The FAA did not receive any comments on this portion of the proposed rule.

Part 440—Financial Responsibility

In the NPRM, the FAA proposed to modify § 440.15 to allow for alternate time frames. The FAA also proposed to modify the definition of ''maximum probable loss'' in § 440.3 to exclude neighboring operations losses from losses to third parties that are reasonably expected to result from a licensed or permitted activity and that have a probability of occurrence of no less than one in ten million (1×10^{-8}), and to include those losses to neighboring operations personnel that have a probability of occurrence of no less than one in one hundred thousand (1×10^{-5}).

In the final rule, the FAA adopts these changes as proposed. The FAA did not receive any comments on this proposal.

7. Miscellaneous Comments

i. General Support/Opposition

Several commenters generally supported the proposed rule as a much-needed effort to consolidate and update the licensing process in a way that would foster innovation and growth of the space industry. Individual commenters supported streamlined licensing as a way for space startups to enter the industry.

The FAA also received comments stating the NPRM fell short in streamlining rules and procedures, as directed by SPD–2. The FAA received comments that the proposed rules made obtaining launch licenses too difficult or expensive for small companies because they require legal or technical experts for small, low-risk launches. An individual commenter asserted the FAA should ease restrictions for space startups. Another individual commenter stated the NPRM added administrative requirements that the FAA would not be able to manage. Virgin Galactic requested that the safety, efficiency, and clarity of the current regulatory regime for suborbital, reusable vehicles be maintained in any new rulemaking.

Individual commenters asserted the NPRM did not contain adequate standards to evaluate the adverse effects of licensed activities on public safety and the environment. The Center for a Sustainable Coast (Center) stated the FAA should require applicants to analyze risks to private or public property, including infrastructure and natural resources. Without such a requirement, the Center and other commenters argued the proposed rule would make it easier to launch over residential areas, environmental preserves, or other areas presenting a high risk of harm to persons, property, and natural resources. The FAA also received comments raising concerns about Camden Spaceport, citing the proposed rule's lack of noise limitations, emissions requirements, and attention to the effects on the environment and residential areas.

The FAA notes that the commenters did not recommend specific changes to the proposed rule, nor did they provide cost data to substantiate the economic concern for small companies. As such, the FAA cannot provide a specific response to these comments but notes its general disagreement with the claim that the new rule will make it too difficult or expensive for small companies to secure commercial space launch and reentry licenses from the FAA. In fact, publicly available means of compliance will assist small companies in entering the market by providing multiple options for complying with the regulations. Similarly, the FAA disagrees that it would be necessary or feasible to create an exception in the licensing process for ''space startups.''

The FAA disagrees further that the administrative requirements to be placed on the FAA will prove impracticable to administer. The final rule upholds the FAA's responsibility to protect public safety and safety of property. In addition, the final rule makes no change to the FAA's assessment of environmental impacts. As such, the FAA disagrees that the final rule will enable operators to secure licenses for launches or reentries that do not satisfy the FAA's public safety or environmental review criteria.

Finally, commenters' concerns regarding Camden Spaceport are beyond the scope of this rulemaking.

ii. Miscellaneous Comments

Starfighters Aerospace asked if all present restrictions on compensation or hire would be removed for licenses and certificates developed collaboratively between AVS and AST.

The FAA notes that this rule will not change any current practice or regulation regarding compensation or hire restrictions under aviation regulations. Changes to compensation or hire are outside the scope of this rulemaking.

An individual commenter stated that the FAA should have incorporated the proposed regulatory text the ARC included at the end of its report, or, alternatively, the FAA should reconvene the SLR2 ARC. Two individuals commented that the FAA did not provide sufficient public engagement for this rule. SpaceX and two individuals commented that the proposed rule did not adequately address stakeholder concerns. Several commenters, including SpaceX and Virgin Orbit, requested a public meeting.

As noted in the NPRM, the FAA does not address the ARC's recommended regulatory text because the recommended text did not receive broad consensus within the ARC. The FAA also disagrees that commenters did not have sufficient opportunity to comment on the NPRM. Although the FAA did not hold a public meeting, as some commenters requested, the FAA accepted written questions seeking clarification on the NPRM and, upon publication of the FAA's responses to those questions, extended the comment period to allow commenters sufficient time to review the FAA's clarifications. Similarly, while the FAA did not reconvene the SLR2 ARC, the FAA

relied heavily upon the recommendations of the ARC, in addition to industry and other public comments, in promulgating this rule.

Relativity Space commented that the NPRM preamble and proposed rule diverged from stakeholder expectations and appeared contradictory. Sierra Nevada requested that the FAA identify in the docket any contractor support used to develop and draft the NPRM.

The FAA generally disagrees that the preamble contradicted the proposed regulation, but notes that, as explained herein, the FAA has revised particular provisions that commenters specifically identified as unclear or impracticable. The question of contractor support is irrelevant to this rule or its promulgation by the FAA.

CSF and SpaceX commented that the FAA should revise § 440.15(c) so that operators would not need to submit proof of insurance, as required by § 440.9, more than once if the insurance policy covered multiple licensed activities.

CSF, Rocket Lab, and SpaceX requested the FAA revise § 440.15(c)(1)(iv) through (c)(1)(vi) to allow use of electronic signatures, in lieu of original signatures, for each party to the required waiver of claims.

Denver International Airport asked the FAA to broaden the scope of financial responsibility required by part 440 to include employees, site operators, neighboring communities, and other stakeholders.

Boeing and Northrop Grumman recommended the FAA add to § 404.5(b) a requirement that petitions for waivers specify the duration or specific mission for which petitioner seeks relief, noting the FAA should not assume a waiver applies to the entire license.

The FAA notes that the previous four issues raised by the commenters are all beyond the scope of this rule because they contained comments on areas of the commercial space transportation regulations that were not part of the proposal.

CSF commented that the NPRM was anti-competitive and discouraged operations from U.S. Government ranges, thereby favoring operators located elsewhere, including outside the United States.

The FAA notes that CSF does not explain why it thinks the rule will discourage operations from U.S. Government ranges and favor operators located elsewhere, including outside the United States. Based on applications received by the FAA, the locations of operations are ultimately determined by the scale and complexity of operations, including the size and type of launch vehicle, resource inputs, infrastructure requirements, and payload considerations. The net cost savings provided by this rule do not significantly change the relative costs of operating from U.S. Government ranges in favor of locations elsewhere given these considerations of scale and complexity of operations. In addition, U.S. companies need a license from the FAA for a commercial space launch regardless of where the launch occurs—this rule does not change that. Currently, and prior to this rule, U.S. companies operate at locations outside of U.S. Government ranges in remote locations and abroad, such as New Zealand.

iii. Advisory Circulars (ACs)

CSF, Sierra Nevada, Space Florida, SpaceX, and two individuals (including Congressman Steven M. Palazzo) commented that the FAA had failed to provide sufficient accompanying guidance documents and ACs to allow industry to provide meaningful input on the proposed regulations. CSF and SpaceX both commented that the FAA's approach to publish many ACs with the final rule did not allow industry to consider the proposed rules and the draft ACs as a complete package. Virgin Galactic recommended that the FAA release updated ACs and guidelines to coincide with the new rule's going into effect, or allow a grace period for applicants and currently licensed operators to be compliant.

The FAA acknowledges the commenters' concerns, but disagrees that the lack of draft ACs, which are necessarily rooted in the text of regulations, prevented commenters from substantively commenting on the proposed rule. The preamble and table of accepted means of compliance provided sufficient detail to support the proposal. The ACs will be non-binding guidance documents designed to provide specific examples of means of compliance and recognized practices without prescribing regulatory requirements. The public and interested parties will have an opportunity to provide comment on the ACs.

As noted under the performance-based regulations discussion, CSF and SpaceX stated that some of the proposed rules may be performance-based, but it was difficult to make that determination without reviewing the accompanying ACs. Space Florida commented that there was an absence of performance criteria and guidance providing acceptable approaches.

The FAA does not agree that the absence of additional draft ACs prevented members of the public from understanding the performance-based requirements as proposed. The proposed requirements, along with discussions in the preamble, provided ample notice to the public. An AC would provide one means, but not the only means, of meeting any particular requirement.

iv. Designated Engineering Representative Model

Blue Origin recommended the Designated Engineering Representative (DER) model to determine compliance with the FAA's launch and reentry regulations.

Delegating the agency's authority to make engineering compliance findings to qualified individuals (DERs) in the context of licensing commercial space transportation is beyond the scope of this rulemaking. The FAA may consider such a recommendation in the future.

v. Request for SNPRM

The FAA received a number of comments requesting that the FAA issue an SNPRM. Denver International Airport commented that the FAA should wait to issue this rule until Congress adopts the Space Frontier Act, and then, if required, issue an SNPRM.

One individual commenter asked the FAA to restart the rulemaking process and work closely with industry and the ARC to produce a final rule that would meet industry needs and would comply with the Commercial Space Launch Act and SPD–2.

The FAA disagrees that the final rule is inconsistent with either the Commercial Space Launch Act or SPD–2. Through this rule, the FAA streamlines the licensing process for commercial launch and reentry operations, and replaces many prescriptive requirements with performance-based criteria, as directed by SPD–2. To forego rulemaking until Congress passes additional legislation on commercial space operations, as Denver International Airport suggested, would contravene the President's policy directive.

The FAA finds no circumstances that would justify a second round of notice and comment or SNPRM. The FAA provided ample opportunity for members of the public to submit comments and supporting evidence to the administrative record, as shown by the large volume of substantive, diverse comments received. The FAA also provided two sets of written responses to clarifying questions, and extended the comment period following publication of those responses. Although the FAA has adjusted and revised parts of the NPRM in light of the

comments received and interagency review, the final rule does not materially differ from the proposed rule such that an SNPRM would have been warranted. Nor does the FAA view the presence of the circumstances that might otherwise necessitate publishing an SNPRM (*e.g.,* availability of new studies or experiments affecting the agency's analysis; supervening legal developments that significantly affect the rulemaking; or any other important change to the agency's analytical framework in the rulemaking).

vi. Airspace

The FAA received a number of comments on the effect of space operations on the NAS. A4A, AAAE, ACI, ALPA, AOPA, CAA, NATCA, and RAA recommended the FAA implement tools to integrate commercial space activities safely and expeditiously into the NAS and to harmonize the regulatory regime governing aviation and commercial space. These commenters argue that greater communication and coordination with NAS users was needed to reduce delays and obstacles faced by both industries (*e.g.,* coordinated vehicle surveillance, traffic management, and hazard mitigation plans).

The same commenters recommended the FAA incorporate into the rule the recommendations of the ongoing Airspace Access ARC. AOPA stated the COMSTAC and SLR2 ARC should have included general aviation representation.

A4A and Southwest Airlines asked that aviation stakeholders be given an opportunity to identify potential NAS impacts during the licensing process. A4A, AAAE, ACI, ALPA, CAA, NATCA, and RAA recommended the FAA require licensees to identify and mitigate negative operational and financial impacts to NAS users resulting from licensed activities. A4A added that hazard mitigation plans and the FAA's accepted means of compliance should be subject to public comment, or otherwise allow NAS users the opportunity to identify airspace and ground safety risks.

The FAA did not propose any changes for the protection of aircraft other than the aircraft risk criteria proposed in § 450.101(a)(3). As such, these comments are beyond the scope of this rule. Recommendations from the Airspace Access ARC, which included commercial space and aviation industry representatives, may inform future actions addressing aircraft protection.

8. Responses to Regulatory Impact Analysis Comments

i. Compliance Period for Legacy Licenses

CSF commented that if the FAA required holders of licenses issued under current regulations to seek renewals under part 450, operators and the FAA would experience significant additional cost and regulatory burdens because currently licensed operators under parts 431 and 435 would have to come into compliance with certain additional requirements in part 450. Blue Origin also expressed concern that, without grandfathering, there would be a cost to transition a license to part 450. Blue Origin pointed out that, according to the NPRM, upon license renewal, an existing operation would have to comply with part 450. Blue Origin disagreed with the FAA's conclusion that operators would not have great difficulty transitioning existing programs to part 450. It cited, in particular, proposed CE_C and associated requirements in proposed § 450.145.

The FAA notes that any request to renew a current license submitted after the effective date of the rule will result in a license valid for no more than five years after the effective date of this rule. However, upon the effective date, the operator will be required to come into compliance with COLA and critical asset requirements. The FAA does not estimate additional costs for those two requirements because the operator will provide the same information the operator currently provides, and the U.S. Government will perform the necessary analyses, as discussed in the preamble sections for Critical Asset and COLA.

After five years from the effective date of the final rule, all vehicle operators must be in compliance with part 450, but information previously submitted to the FAA in obtaining a license under parts 417 and 431 may be referenced as means of compliance to meet the requirements of part 450. Concerns over costs of proposed CE_C and FSS requirements in § 450.145 are discussed in the remainder of this section. There may be costs to transition licenses following the 5-year period after the rule's effective date. However, as mentioned previously, the FAA anticipates few, if any, additional requirements that could not be fulfilled by referencing previous submittals.

ii. § 450.47 Environmental Review

Several commenters stated that the proposed requirements would impose added costs for which the FAA did not account. Space Florida expressed concern that the FAA may determine that new or supplemental environmental analyses would be necessary for operators opting for a single vehicle license with vehicle and site flexibility. The commenter was concerned that such analyses would be required before the determination to add multiple vehicle configurations, operational parameters, or launch site locations to an operator's single license. Spaceport Strategies also expressed concern that the FAA had not analyzed the cost to launch operators or to launch site operators for additional or redundant environmental reviews that the FAA would likely require of an operator under the new rule in order for an operator to obtain a single license covering multiple launch or reentry sites or multiple vehicle configurations and flight operations. Spaceport Strategies noted that the added costs of repetitive or redundant environmental reviews would cause unquantified cost impacts on licensees, including State and local launch site license applicants. CSF stated that applicants using the licensing option to include multiple sites under one license may be vulnerable to time and cost uncertainty resulting from these environmental review requirements.

The FAA does not agree that the final rule will impose additional costs beyond what is currently required of applicants for environmental reviews, including applications for a single vehicle license or licenses that include multiple sites, as the final rule codifies current practice. NEPA requires that an environmental review be completed for each site covered by the FAA license. As such, the final rule makes no change to the existing requirement that applicants submit information allowing the FAA to fulfill its responsibility under NEPA to assess the environmental impacts associated with the proposed activities, at each site where the licensed activities will occur. An applicant must submit these materials to allow the FAA to conduct site-specific reviews regardless of whether multiple sites or vehicles are covered under one license or several licenses. This could be accomplished by including multiple sites into one NEPA document, or separating them into individual NEPA documents.

Spaceport Strategies commented that the FAA did not consider the offsetting costs of environmental reviews for the new vehicles and launch sites for which cost savings were assessed. The FAA notes it did not include offsetting costs for new vehicles and launch sites because the same costs for environmental reviews will be imposed

under the current regulations. There will be no change in costs.

Spaceport Strategies commented that the FAA's re-write of environmental review requirements was more than a simple ''consolidation'' as reported in the Preliminary Regulatory Impact Assessment. The commenter stated that the proposed requirements had unquantified cost impacts upon licensees, including State and local launch site license applicants, for the additive costs of repetitive or redundant environmental reviews.

As discussed in the Environmental Review section of this preamble, the final rule codifies existing environmental review requirements. The commenter did not identify the environmental reviews it deems repetitive or redundant. However, the FAA confirms that in codifying existing practice, the final rule will not impose additional costs for environmental review.

Spaceport Strategies commented that licensees would face significant costs to redo environmental analyses for previously studied and permitted sites. As an example, the commenter referred to Space Florida's being required to spend almost $239,000 for another environmental assessment for its Launch Site Operator License for horizontal launch at the former Shuttle Landing Facility, when NASA had completed two previous environmental assessments on the same facility.

The FAA notes this rule will impose no additional environmental reviews nor require a redo of an environmental assessment if an operator's operation remains within the scope of the original assessment. However, consistent with NEPA, an operator will be required to do additional environmental reviews if the scope of its operation has changed.

Spaceport Strategies commented that the FAA did not address environmental review regulations derived from practices and policies being codified into rules as potential federalism issues with the State and local jurisdictions that operate the part 420-licensed sites. The commenter stated that the FAA also did not consider that some, if not all, of the local and State authorities are small governmental entities for purposes of the Regulatory Flexibility Act.

The FAA determines that this rule codifies existing requirements in FAA Order 1050.1 and will not affect the applicability of NEPA or any other Federal environmental law to non-Federal launch or reentry sites. Therefore, the FAA finds that the final rule will not have an additional cost impact on small governmental jurisdictions.

iii. § 450.101(a)(b) Neighboring Operations

Virgin Orbit believed the costs of the additional E_C analysis to use in determination of neighboring operations personnel would be $10,000. As discussed in the preamble section for Neighboring Operations Personnel, the FAA acknowledges that this requirement will require additional analysis; however, the FAA expects that this analysis will involve minor additional effort because the operator already has to perform a similar analysis for the public and will only need to account for the population of neighboring operations personnel, if any.

Blue Origin expressed concern that the FAA might implement a requirement for which compliance would be impossible, or would lead to the creation of a sole source provider for a service necessary to demonstrate compliance, if the FAA does not explain how the transfer of neighboring operations personnel population data would take place. Sierra Nevada expressed concern regarding an applicant's ability to perform calculations to determine which neighboring operations personnel could remain on a launch site, because the applicant would need to get accurate data regarding the populations and locations of neighboring operations. Sierra Nevada pointed out that, because data could be on personnel performing operations for competing companies, the data could be proprietary or sensitive. Sierra Nevada suggested the FAA could perform this function to guard the proprietary nature of the data.

In the final rule, the FAA notes that the Federal or licensed site operator will determine those personnel who are eligible for neighboring operations personnel status in coordination with the launch operators, because the site operator is in the best position to identify which personnel are required to perform safety, security, or critical tasks at the launch site. Further, as previously discussed, both the launch or reentry operator and the neighboring site operator benefit from this treatment of neighboring operations personnel.

Spaceport Strategies faults the FAA for not comparing the estimated marginal productivity improvement created by allowing certain personnel of neighboring operators to remain at work during nearby operations with adverse schedule and competitiveness losses if the FAA did not adopt the alternative approaches suggested by the ARC and CSF.

The alternative chosen by the FAA provides cost savings compared to the current regulations, and the FAA believes that this approach is consistent with the intent of SPD–2. The FAA acknowledges that other approaches exist, and considered three alternatives that are discussed in the Regulatory Flexibility Act section of this preamble.

Spaceport Strategies commented that the labor categories used to calculate neighboring operations personnel savings (engineers and technicians) did not align with the restricted categories of work functions allowed to remain (such as personnel required for safety, security, or critical tasks), indicating that the FAA's savings estimates may not actually be realized.

The FAA received input from licensed operators on the labor categories that might be allowed to remain on the launch site and, based on that input, is confident that these are reasonable labor categories.

iv. § 450.101(a) Incorporate Waterborne Vessels Into Collective Risk Criteria

To incorporate waterborne vessels into collective risk assessment, Virgin Orbit requested the FAA and other regulators work with launch service providers by providing databases on global marine traffic. Virgin Orbit also requested guidance on debris size/fragment velocities that would result in injury to marine traffic, in an appendix or AC. Virgin Orbit asserted that this requirement is not found in the existing regulations, and estimated that the additional cost to analyze and document the effort would be approximately $20,000 per launch, which would become significant costs for a large number of launches.

The FAA does not agree that there will be additional costs of any significance from the requirement to incorporate waterborne vessels into collective risk criteria. The operator can continue its current practice and demonstrate compliance in accordance with the RCC 321–20 Supplement. The FAA does not find a need to provide databases on global marine traffic because there are several public sources of data on ship traffic available through the internet which aggregate near real-time Automatic Identification System (AIS) [191] data from satellites and ground stations. The FAA notes that all vessels over 300 tons on an international voyage, all domestic vessels over 500 tons, and all passenger carriers, are

[191] AIS is a standardized maritime navigation safety communications system that provides vessel information automatically to appropriately equipped shore stations, other ships, and aircraft.

required to operate ''Class A'' AIS transponders, broadcasting continually-updated data, such as identity, position, course, speed, ship characteristics, cargo, and voyage information, to other vessels and the shore. The United States Coast Guard requires AIS Class A transponders on all U.S. vessels engaged in commercial service that are (1) self-propelled and over 65 feet in length, or (2) towing vessels of 26 feet or more in length and more than 600 horsepower. The USCG also requires AIS Class B transponders on smaller vessels, such as fishing industry vessels.[192] Detection of smaller vessels, which tend to remain close to shore, can be accomplished without AIS by fixed ground-based and ship-board radar, as well as surveillance aircraft. The FAA will publish an AC on population exposure analyses that includes details about available databases that provide valid data on ship traffic, including near real-time ship traffic useful for E_C analyses. The forthcoming RCC 321 Supplement will also include this information.

The ship probability of impact contours (P_I) and individual risk contours are already required and computed based on current practice to establish ship hazard areas. The FAA Office of Commercial Space Transportation will facilitate access to the ship traffic densities so that the E_C contribution from ships can be computed with a spreadsheet.

v. § 450.101(a)(3) Aircraft Risk

Virgin Orbit commented on the proposed requirement for an operator to establish aircraft hazard areas necessary to ensure the probability of impact with debris capable of causing a casualty for aircraft does not exceed 1×10^{-6}. To incorporate airborne vessels into the collective risk assessment, Virgin Orbit requested FAA databases on civil and general aircraft, predicted air traffic, and debris size and velocities that would result in aircraft casualties in order to comply with this requirement. Virgin Orbit stated guidance on debris size and fragment velocities could be added in an appendix or AC. Virgin Orbit indicated that this is a new requirement relative to the existing regulations and estimated that the additional cost to analyze and document the effort would be $20,000 per launch. While not significant by itself, Virgin Orbit stated that the additional cost for a large number of launches becomes significant.

The FAA does not agree that this is a new requirement. Current part 431 regulations require an operator to demonstrate that the risk level to an individual does not exceed 1×10^{-6} probability of casualty per mission. The part 431 requirement is equivalent to the corresponding part 450 requirement, which requires that the probability of impact with debris capable of causing a casualty for aircraft does not exceed 1×10^{-6}. Because people in aircraft are not excluded from the part 431 requirement, part 450 is not adding a new requirement to demonstrate risk level for aircraft. In addition, § 417.107(b)(4) is identical to the requirement in § 450.101(a)(3). Part 450 does not require a collective risk assessment for aircraft, so aircraft traffic densities, data on civil and general aircraft, and predicted air traffic, are not necessary.

vi. § 450.101(a)(4) Critical Assets

Blue Origin commented that because operators on non-Federal launch or reentry sites would be required to comply with USAF Federal site requirements, the FAA would need either to confirm it had considered private and licensed spaceports in its cost assessment and that those operators would not need to complete any critical asset analyses, or to confirm they were not included. The commenter also stated that it was possible the new requirement would impose costs for operators not at Federal sites.

Spaceport Florida voiced concern about the creation of a new category of property designated as a ''critical asset,'' which would be required to be protected against ''loss of functionality'' by prescribed risk criteria limiting each designated asset's exposure to launch or reentry hazards. The commenter indicated concerns about extraordinary analysis requirements, unknown costs, and program risks asking what limits the types and numbers of assets that may be designated by multiple parties within proximity to a licensed launch activity.

Spaceport Strategies commented that the FAA had not conducted certain analyses. These included analyzing the cost to a licensee to perform a risk assessment on each FAA-identified critical asset to be incorporated into a flight safety risk analysis, analyzing the cost to identify critical assets to be evaluated as a property at risk, and analyzing operator time to process waivers required for an operator's own critical assets or for an asset that may be at risk for a particular critical licensed activity. Spaceport Strategies expressed concern that the proposed requirements duplicated existing standards imposed by NASA and the USAF, and noted that there was only brief mention of this newly proposed requirement in the FAA's Preliminary Regulatory Impact Analysis, which identified no costs associated with its implementation. As proposed, this requirement would apply to all licensed launches and reentries wherever they may occur, at any site in the United States. The commenter noted that in the Baseline Analysis of the cost impacts and cost savings of proposed § 450.101, the FAA claimed no cost impact for a new requirement that clearly would add cost burden to every licensee, as well as to the FAA itself.

The FAA notes that under the final rule the U.S. Government will perform the identification and analysis of critical assets. The FAA expects these costs to be relatively small. The Federal launch or reentry site will perform the analysis for launch or reentry operations from Federal sites, and the FAA will perform the analysis for operations from non-Federal launch or reentry sites. Therefore, operators should incur no costs for determination of critical assets.

vii. § 450.101(c) High Consequence Event Protection

Spaceport Strategies stated that the proposed requirement to use the CE_C analysis tool would be prohibitively expensive—even technologically infeasible—to use, and faulted the Preliminary Regulatory Impact Analysis for not including these costs. The commenter also criticized the FAA for not including the costs for operators to learn the skills or contract for the analysis. In addition, they stated that the FAA did not include its cost to hire in-house personnel or contractor skills to validate that the operator's analysis justifies not needing an FSS.

CSF found the CE_C to be a new and costly calculation that may require significant resources, including possible reliance on contracts for expensive modeling capabilities. The commenter feared that meeting the CE_C may result in substantial increase in cost to those operators currently able to show compliance. Based on its understanding of the proposed rule, CSF concluded that the majority, if not all, of the operators would be captured by proposed § 450.145(a)(1) and would be required to implement an FSS of the highest reliability. CSF disagreed with the FAA's estimated FSS cost savings and indicated there would be cost increases.

Virgin Orbit stated that CE_C, as a new requirement, would be burdensome to implement and would require changes to its in-house algorithm to compute flight corridors with associated E_C. According to Virgin Orbit, this new burden would impact timelines for future launches and would have

[192] USGC regulations regarding AIS are given in 33 CFR 164.46.

significant costs to implement. The commenter recommended CE_C be included as one method to determine whether an FSS was needed and not as a required calculation. The commenter further noted that CE_C, as proposed, would be better suited in an AC. Blue Origin described the proposed CE_C as a complicated analysis with debatable accuracy. Several commenters disagreed with the FAA's conclusion that this new ''consequence risk'' methodology aligned with current practices.

Rocket Lab explained that, because proposed CE_C disregarded demonstrated reliability and experience, it appeared almost impossible for any orbital launch vehicle to meet the prescribed CE_C thresholds. Preliminary calculations suggested that the majority of orbital launch vehicle operators would be directed toward a flight abort system of the highest prescribed reliability.

The FAA does not agree that the cost to use CE_C is prohibitive or that Virgin Orbit will be required to make significant changes to its in-house algorithm. Additional costs associated with modifications of analysis tools, adjustments to data development, additional analysis runtime, and interpretation of the results as detailed below, should not be significant.

The modification of existing analysis tools is expected to take only a few hours. As explained earlier, CE_C is inherent in the calculation of total casualty expectation. If the capability to output the CE_C values is not already part of the calculation tool, adding the output of this value for each scenario should require no more than a few hours of effort. This estimate is included in the Regulatory Impact Analysis for those operators who choose to do the analysis.

Because the CE_C metric is more sensitive to the input data and to numerical sampling approaches than the collective E_C metric, more rigor needs to be applied to the analysis or more uncertainty accepted in the result. Some data development may need to be of higher fidelity and more computation samples run to achieve a statistically meaningful answer. Therefore, the FAA finds there will be additional cost to perform the analysis. To comply with § 450.101(c), the operator first calculates the CE_C, assuming no FSS is present, to determine whether flight abort with an FSS meeting the requirements of § 450.108(b) is needed. These calculations will incur 5 percent of the debris analysis costs.[193] These estimates are included in the Regulatory Impact Analysis.

Applicants using an FSS can use hazard containment or analysis of CE_C as key criteria in the determination of flight safety limits. The cost to interpret CE_C results for flight safety limit development is expected (after the debris analysis is run) to reduce the costs nominally compared to existing containment approaches.

Using its CE_C tool, ACTA, under contract to the FAA, has identified several launches in the launch forecast that will not need an FSS. The Regulatory Impact Analysis includes more information on these launches, as well as an updated estimate of cost savings anticipated because these launches will not need an FSS.

The FAA notes that any operator that agrees to have a § 450.145-compliant FSS does not have to do a CE_C analysis to determine the required reliability level of the FSS. However, a CE_C analysis may still be needed to determine the flight safety limits. As discussed in the High Consequence Event Protection preamble section, the final rule now has a number of flexibilities in § 450.101(c). Nevertheless, an operator could opt to use the flight safety limits approach in current § 417.213 as a means of compliance with § 450.108(5), and thus avoid any costs associated with CE_C analysis.

viii. System Safety Program, Post-Flight Data Review, Post-Flight Reporting

CSF disagreed with the FAA's rationale that any added burden of this section would be minimal because industry practice was to review post-flight data for reliability and mission success. CSF maintained that the proposed post-flight data requirement extended beyond industry practice. The commenter also stated that it was not clear whether the process for evaluating post-flight data would be subject to FAA review and approval, which would create an even larger burden. Sierra Nevada also commented that the proposed requirements extended beyond the industry practice of reviewing post-flight data for reliability and mission success, to requiring an operator to develop and employ a process for evaluating post-flight data to ensure consistency between the assumptions used for preliminary safety assessment, any flight hazard or FSA, and associated mitigation and control measures. Rocket Lab and Sierra Nevada stated the proposed § 450.103(d) would require the operator to address any anomaly identified and resolve inconsistencies prior to the next flight of the vehicle. Rocket Lab pointed out that this was overly burdensome.

The FAA disagrees with the commenters. The FAA is only concerned with ensuring consistency between the assumptions used for any safety analysis and associated mitigation and hazard control measures. It is industry practice to review post-flight data to address vehicle reliability and mission success.

The FAA further notes that current regulations already require that any representation contained in the license application that is material to public health and safety or the safety of property be kept accurate and complete, therefore any additional burden from § 450.103(d) will be minimal. Currently, operators review the post-flight data because it provides valuable information on future operations. At a minimum, in the final rule, § 450.103(d)(1) will require that an operator employ a process for evaluating post-flight data to ensure consistency between the assumptions used for the hazard control strategy determination, any hazard or FSA, and associated mitigation and hazard control measures. With respect to § 450.103(d), the FAA will evaluate the post-flight data review process during the application evaluation. Applicants will not be required to provide information obtained from the post-flight data review to the FAA unless specifically requested to do so during the compliance monitoring process. The FAA finds that it has always been the operator's responsibility to ensure the accuracy of the relevant safety analyses. Operators must review flight data in order to ensure that the operation is conducted as predicted, and to inform necessary safety analysis changes for future flights.

Section 450.215 will continue to require licensees to submit a post-flight report no later than 90 days after an operation if there are any anomalies in the flight environment material to public health and safety and the safety of property, and if there is a need for associated corrective actions. This practice is currently required by § 417.25(c). While RLV operators licensed under part 431 are not currently required to submit a post-flight report, they are required to ensure that all assumptions and representations made in their application that are material to public health and safety or the safety of property are kept accurate and complete, in accordance with §§ 413.7 and 431.73(b)(2). As such, the FAA expects the added burden to be minimal because launch and reentry operators regularly track anomalies and

[193] Debris cost analysis is estimated to cost $50,000.

implement corrective actions for mission assurance, continuing license accuracy, and safety purposes. The FAA is normally made aware of any anomalies and corrective actions that are material to public health and safety through its inspection program.

ix. § 450.141 (Proposed § 450.111) Computing Systems and Software Systems

Several commenters expressed concern that the NPRM proposed a prescriptive approach to the software hazard, which would impose a significant burden on operators to meet all of the proposed requirements and structure.

An individual commenter estimated that changing the review process and structure of software would require a substantial new effort and add costs of over $40,000 per launch. Blue Origin faulted the FAA for proposing overly prescriptive regulations governing how the operator would design and test software. Blue Origin also contended that the prescriptive proposed requirements did not integrate well with most industry applications and best practices and failed to address critical aspects of safety sufficiently for aeronautical databases, complex distributed software systems, new techniques, and machine learning. Blue Origin indicated that these would threaten progress being made towards safer, lower cost and higher quality software approaches. CSF maintained that the requirements of proposed § 450.111 prescribing how the operator would design and test software, and providing only one way to demonstrate that software was safe, failed to allow development of new technologies that could lead to safer solutions, and would greatly increase costs. Leo Aerospace stated that the testing requirements of proposed § 450.111(d)(2) and (f)(1) were so prescriptive that they would be cost-prohibitive.

In the final rule, the FAA revises § 450.111 to mirror the typical structure of computing system safety application data submissions and adds flexibility in the means of compliance for key aspects of safe computing system development. The FAA notes that these revisions address the key aspects of commenters' concerns. The final rule on computing and software systems, now located in § 450.141, aggregates the requirements in proposed § 450.111 into performance-based objectives set in the context of the appropriateness of each element for the system as a whole. This aggregation removes any prescriptive requirements and replaces them with the performance-based objectives. The performance-based objectives are the elements of software development and testing processes that enable an understanding of the public safety implications of each software component, and the objectives are structured to mirror typical software safety application data submissions to minimize or eliminate the need to adapt existing software safety processes to fit the new regulations. The final performance-based objectives expand the range of software safety approaches that could meet the regulation to enable more innovation while keeping the compliance burden at or below the level proposed in the NPRM.

x. Proposed § 450.113(a)(5) Flight Safety Analysis Requirements

Virgin Galactic commented that its launch system had an FSS in the form of its pilot, rendering the need for ''demonstrated reliability'' unnecessary. In addition, unlike the ELVs addressed by part 417, Virgin Galactic's launch system does not have a large effective casualty area, which raised the question of whether the risks truly justified the costs of the proposed requirement, particularly to small businesses.

Under this rule, currently licensed hybrid systems will not have to do an FSA for phases of flight that have a flight history to demonstrate reliability based on operational and flight history in lieu of a traditional risk analysis. This allowance is discussed in greater detail in the Hybrid Vehicles section of the preamble.

xi. § 450.115 Flight Safety Analysis Methods

CSF commented that prescriptive FSA requirements are inappropriate for some vehicles and operations. An applicant would have to propose an alternative method of compliance or submit a waiver request, resulting in an increase in the amount of work. The lack of tool-availability might also cause some applicants to incur costs of performing these analyses themselves. CSF noted these costs had not been included in the cost analysis. The FAA agrees that prescriptive requirements are not appropriate and revises the requirements to be more performance-based.

x. Independent Analyses

CSF stated that the NPRM's Flight Safety Analysis sections (proposed §§ 450.119 and 450.135) include multiple references to an applicant submitting any additional products that allow an independent analysis as requested by the Administrator. CSF stated that this behavior of recreating an applicant's analysis was already an expensive and burdensome aspect of the current rules that should be ended. A couple of commenters provided estimates of additional hours of work that might be required to conduct independent analyses.

As mentioned previously, the goal is for the FAA to evaluate, in an efficient and thorough manner, the validity of the analysis. The FAA finds that conducting an independent analysis is typically the most efficient and thorough means to verify compliance with the FSA requirements for novel launch or reentry operations or operators that propose to use substantially new FSA methods. Furthermore, the FAA plans to provide benchmarks for comparison purposes that operators can reference to as part of the validation and verification of their analysis methods.

Therefore, the FAA does not anticipate this rule will impose an additional cost burden for independent analyses because conducting independent analyses is current practice.

xi. § 450.135 Debris Risk Analysis

An individual commenter indicated that the proposed rule would add significant work in additional debris risk analysis beyond what the operator was doing to comply with the current regulations. The commenter specified that the proposed rule would add requirements on explosive debris, toxic release effects from the debris, accounting for sheltering of individual from buildings and vehicles, a casualty mode that included ricochet fragments, and impacts to critical assets. It would also add reporting requirements for the top ten impacted population centers and the need to perform conditional probability calculations in the FSA.

The FAA notes that an explosive debris or toxic release effects analysis will not be required if the vehicle does not have explosive debris and toxics. Explosive debris or toxic release effects analysis are currently required for ELVs under § 417.107(b)(1) and for RLVs under § 431.35(b)(1)(ii), so the requirement for those analyses under part 450 would not impose additional costs. The final rule requirements allow operators to determine how to conduct their debris risk analysis. For example, an operator will not need to update the debris risk analysis to account for sheltering or ricochet if it uses a conservative estimate of the casualty area for people in the open pursuant to § 450.101(g). Under the final rule, the FAA or Federal launch or reentry site will do any critical asset risk assessment. The cost of the CE_C

assessment is addressed in the High Consequence Event Protection preamble section. Reporting the top ten population centers is a minimal amount of additional paperwork.

xii. § 450.143 Safety-Critical System Design, Test, and Documentation

An individual commenter expressed concern that the proposed rule would constrain the design by prescribing fault tolerance where an operational mitigation solution might exist, and stated that this would result in a large burden.

The FAA finds that industry interpreted this regulation to be burdensome due to a misunderstanding of the breadth of possible means of compliance to the ''fault-tolerant'' requirement in § 450.143(b). In the NPRM, the FAA noted that while redundancy was a currently prescribed requirement for some safety-critical components, the intent of this requirement was to accept other methods, including fail safety and damage tolerance for systems like primary structures that could not be redundant. This flexibility permits operational restrictions, testing, and inspection to factor into the design to demonstrate that a system is fault-tolerant. The FAA resolves these concerns by revising § 450.143(b) to allow for other means of compliance.

xiii. § 450.145 Flight Safety System

Several commenters took issue with the FAA's assessment of cost savings associated with the new approach to FSS implementation. CSF disagreed there would be cost savings and expressed that the majority of operators would be required to implement an FSS of the highest reliability. CSF concluded that the result would be significant increases in cost and oversight burdens to every operator not already operating at a U.S. Federal site that has not yet implemented a RCC 319–4-compliant FSS. Rocket Lab stated that preliminary calculations suggested that the majority of orbital launch vehicle operators would be directed toward a flight abort system of the highest prescribed reliability. Blue Origin stated that most, if not all, operators (whether smaller suborbital launch vehicles operating in remote locations, or larger orbital launch vehicles operating at Federal sites) would be forced down a path of implementing an FSS that must comply with an unmodified set of prescriptive USAF requirements. Spaceport Strategies criticized the FAA's analysis of cost savings from launches not requiring an FSS as being speculative and not providing information on whether the vehicles would fly from existing or newly licensed or private launch sites. It expressed that the uncertainties made the projected savings an overstatement.

The FAA disagrees that most, if not all, operators will be required to implement an FSS of the highest reliability. For some launches, no FSS may be required; for others, an FSS will be required, but not of the highest reliability. The FAA sponsored an analysis performed by ACTA [194] using a CE_C model to evaluate selected [195] prospective launches and determine those which would not need a FSS to be in compliance with part 450. The FAA then determined which of these launches identified as not needing an FSS under part 450 would be required to employ an FSS under part 431 or current practice. Based on cost input received from industry on FSS costs, the FAA then estimated cost savings due to the fact that some launches would not need an FSS under part 450, as determined by the ACTA analysis. The cost savings calculations are in the Regulatory Impact Analysis.

xiv. § 450.161 Control of Hazard Areas

CSF stated that, in cases in which the hazard area locations were in extremely remote locations or significant distances away from the launch and reentry site, it was unreasonable for cost and logistics reasons to expect that a commercial company could provide such surveillance. The FAA notes that § 450.161 only requires surveillance to the extent necessary to ensure compliance with § 450.101. Hence, surveillance will be unnecessary in extremely remote locations.

xv. § 450.167 Tracking

Sierra Nevada expressed that, as written, the proposed rule seemed to imply that tracking would be required for every possible piece of debris in off-nominal scenarios. Sierra Nevada noted this would be burdensome, cost prohibitive, and increase the risk to the public. As clarified by the FAA in ''Answers to Clarifying Questions Received by June 28, 2019'' and ''Answers to Clarifying Questions Received by July 29, 2019,'' the term ''all stages and components'' does not imply that all debris must be tracked to the ground after a vehicle breakup. In the final rule, the FAA replaces the requirement to ''determine the actual impact locations'' with the phrase, ''predict the expected impact locations,'' in § 450.167. Hence, the FAA finds the final rule requirements are consistent with current practice and thus incur no additional costs.

xvi. § 450. 173 Mishap Plan—Reporting, Response and Investigating Requirements

Sierra Nevada recommended removing the mishap plan requirement to report debris impact points, including those outside a planned landing or impact area as proposed in § 450.173(d)(3)(iv), this requirement would be burdensome, cost prohibitive, and not reasonable. Sierra Nevada stated that this burden would follow because hazard areas are generated as probability contours and not contours of total containment. The commenter further stated it was realistic that, in the event of a breakup scenario, debris would exist outside the hazard area but not at a high enough probability to warrant segregation.

The FAA notes that the requirement to report hazardous debris impact points is consistent with the current 5-day reporting requirements for ELVs. It is not the FAA's intent to require tracking and surveillance for every possible piece of debris in off-nominal scenarios. However, based on the vehicle's last-known state vector, an operator should be able to calculate approximate hazardous debris impact points, including those points outside a planned landing site or designated hazard area. The FAA will consider an event that results in hazardous debris impact points outside a planned landing site or designated hazard area as a mishap. Considering the potential increased risk to public safety resulting from hazardous debris impacts outside planned landing site or designated hazard area, the FAA finds that this requirement is reasonable and necessary.

In addition to requiring submission of a 5 day report in all mishap cases, there might be some additional cost associated with submitting debris impact location data, which is not currently required under part 431. Part 417 requires submission of this data

[194] ACTA, LLC is a risk management company that evaluates safety hazards and risks from space launch vehicle debris, blast, fire, and toxic gases. The FAA sponsored ACTA to perform a series of tasks to investigate the potential conditional risks associated with past and foreseeable launch operations. The study provided an independent evaluation of the potential for the CE_C related requirements in the NPRM to necessitate changes to current practice for more than a dozen missions involving large, medium, and small launch vehicles from a wide variety sites.

[195] In selecting which launches to analyze, the FAA analyzed those launches planned from remote areas, suborbital and launches with a certain kind of upper stage. This is because orbital launches that are not from remote areas are going to exceed the risk threshold of greater than 1×10^{-3} conditional expected casualties for uncontrolled areas.

only for debris that lands outside the impact limit lines.

The FAA does not agree that this requirement will be costly or unreasonable for the following reasons. First, the requirement has been changed to require that only hazardous debris be reported. Second, operators currently must employ vehicle tracking for normal flight. In the event of a vehicle breakup, operators should be able to approximate any hazardous debris impacts in relation to the designated landing site or hazard area, based on the vehicle's last known state vector or other tracking resources required for normal flight. In other words, this requirement will involve only minimal costs because an operator can leverage vehicle tracking data it already collects in order to submit the debris impact location data. In addition, the FAA believes the operator will benefit from reporting this debris.[196]

xvii. § 450.185 Ground Hazard Analysis

Virgin Galactic commented that the ground hazard analysis requirements proposed in the NPRM would represent new requirements and a new cost burden, creating new work outside of its existing license. Virgin Galactic requested that the FAA determine whether a ground hazard analysis would be necessary for hybrid operators, in accordance with the Congressional direction that the FAA regulate only to the extent necessary.

The FAA included estimated costs for ground hazard analyses in the NPRM. For the final rule, the FAA estimates that 75 percent of operators will spend no more than 80 hours on the ground hazard and 25 percent of the operators will spend no more than 160 hours (non-recurring one time per license).

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 and Executive Order 13563 direct that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. In addition, DOT rulemaking procedures in Subpart B of 49 CFR part 5 instruct DOT agencies to issue a regulation upon a reasoned determination that benefits exceed 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 as amended) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Agreements Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. 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 likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995). The FAA has provided a more detailed Regulatory Impact Analysis of the benefits and costs of this final rule in the docket of this rulemaking. This portion of the preamble summarizes the findings of this analysis.

In conducting these analyses, FAA has determined that this rule will unleash economic benefits that will outweigh its costs. This rule is a significant regulatory action, as defined in section 3(f) of Executive Order 12866, as it raises novel policy issues. This rule is also significant under DOT's administrative procedure rule on rulemaking at 49 CFR 5.13 for the same reason. The rule will have a significant economic impact on a substantial number of small entities. It will not create unnecessary obstacles to the foreign commerce of the United States, and will not impose an unfunded mandate on State, local, or tribal governments, or on the private sector.

Changes to Regulatory Impact Analysis Since the Proposed Rule

The FAA updates its analysis for changes incorporated in the final rule and additional information and data identified during the comment period. The following is a summary of these changes (see the *Regulatory Impact Analysis* available in the docket for additional discussion and detail).

- Changes period of analysis from 5 to 10 years to capture the effects of a five-year compliance period and recurring impacts of the rule.
- Provides a range of net impacts from low to high based on launch forecast that includes base, low, and high scenarios. The FAA uses the base scenario as the primary estimate of the net impacts of this rule.
- Incorporates additional data to update savings estimates for changes to an FSS.
- Updates data and analysis of neighboring operations (number of personnel that evacuate) that decreased savings.
- Updates wage data and adds/clarifies small costs.

Statement of Need

In 2018, DOT was directed by the National Space Council and SPD–2 to streamline the regulations governing commercial space launch and reentry licensing. The purpose of the final rule is to streamline and simplify the licensing of launch and reentry operations by relying on performance-based regulations rather than prescriptive regulations. This action consolidates and revises multiple commercial space launch and reentry regulations addressing licensing into a single regulatory part that states safety objectives to be achieved for the launch of suborbital and orbital launch vehicles, and the reentry of reentry vehicles. This action also enables flexible time frames, removes unnecessarily burdensome ground safety regulations, redefines when launch begins to allow specified pre-flight operations prior to license approval, and allows applicants to seek a license to launch from multiple sites. This rule is necessary to reduce the need to file and process waivers, improve clarity of the regulations, and relieve unnecessary administrative and cost burdens on industry and the FAA. The intended effect of this action is to make commercial space transportation regulations more efficient and effective, while maintaining public safety.

Affected Operators and Launches

At the time of writing based on FAA license data, the FAA estimates this rule will affect 12 operators that have an active license or permit to conduct launch or reentry operations. In addition, the FAA estimates this rule will affect approximately 672 to 800 launches over the next 10 years, with a base or primary estimate of approximately 737 launches.[197] The

[196] The debris data reported can be valuable in assessing the current license representations to allow for adjustments to expand launch availability or enhance the safety of operations.

[197] Based on historical launch data from the FAA Office of Commercial Space Transportation and the 2020 FAA Aerospace Forecast (*https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2020-40_FAA_Aerospace_Forecast.pdf*). *See* the Regulatory Impact Analysis of this rule in the docket for more information. The FAA acknowledges that there is uncertainty estimating future launches over a 10-year period since industry is expanding and planning for more launches in the future given expected business and economic conditions. In addition, historical data

Continued

FAA anticipates this rule will reduce the costs of current and future launch operations by removing current prescriptive requirements that are often burdensome to comply with or require a waiver. The FAA expects these changes will lead to more efficient launch operations and have a positive effect on expanding the number of future launch and reentry operations.

Summary of Impacts

The FAA bases the analysis of this rule on a launch forecast that includes base, low, and high scenarios. Accordingly, this analysis provides a range of net impacts from low to high based on these forecast scenarios. The FAA uses the base scenario as the primary estimate of the net impacts of this rule.

For the primary estimate, over a 10-year period of analysis, the rule will result in present value net cost savings to industry of about $53.9 million at a seven percent discount rate with annualized net cost savings of about $7.7 million. At a three percent discount rate, the 10-year present value net cost savings to industry is about $68.3 million with annualized net cost savings of about $8.0 million. The rule will also result in net present value savings for the FAA of about $1.7 million at a seven percent discount rate over the same period of analysis, with annualized net cost savings of about $0.24 million. At a three percent discount rate, the net present value savings for the FAA is about $2.3 million with annualized net cost savings of about $0.27 million.

The largest quantified cost saving for industry will result from eliminating or modifying requirements for an FSS on some launches: About $52.6 million in present value savings over 10 years at a seven percent discount rate or about $66.6 million at a three percent discount rate. As previously discussed, the FAA will move from prescriptive FSS requirements to performance-based requirements. The rule will not require all launch vehicles to have an FSS. Launch vehicles that have a very low probability of multiple casualties even if vehicle control fails will not be required to have as robust an FSS. In addition, vehicles that have moderately low probability of casualty, even if vehicle control fails, will not be required to have robust FSS.[198] These performance-based requirements will reduce costs for some vehicle operators, especially for small vehicles or those operating in remote locations.

The final rule will also generate another important area of quantified savings by providing a new definition of ''neighboring operations personnel'' and establishing new criteria for neighboring launch site personnel for the purposes of risk and financial responsibility. The change will allow affected operators to reduce the number of personnel that must evacuate and will enable operations that are more concurrent by accepting a small safety risk tradeoff. The FAA has monetized the value of this small increased safety risk as summarized in the following tables. The FAA estimates the present value of these small increased safety risks to be about $0.16 million discounted at seven percent or about $0.2 million discounted at three percent over ten years.

The FAA estimates some small costs to industry that will assist both industry and the FAA in the implementation of this final rule, such as providing information to the FAA that other agencies frequently request or performing one-time updates of flight safety limit analyses and ground hazard analyses that will be used to determine performance-based means of compliance that provide future savings. In addition, there may be additional costs for the modification of existing licenses to benefit from the cost saving provisions of this final rule. The FAA will also incur small costs for payload review, flight hazard analysis, ground hazard analysis, and the review of modifications to existing licenses.

The following tables present a summary of the primary, low, and high estimates of the quantified savings, costs, and the net impacts of the rule.

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS—BASE SCENARIO OR PRIMARY ESTIMATE

[Presented in thousands of dollars]

Impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Cost Savings	$54,634.8	$69,193.0	$1,864.2	$2,468.3
Costs	−733.3	−872.2	−162.7	−199.6
Net Cost Savings	53,901.5	68,320.7	1,701.5	2,268.7
Annualized Net Cost Savings	7,674.4	8,009.3	242.3	266.0
Increased Safety Risks	−158.5	−197.3	.....	.....
Net Cost Savings *less* Increased Safety Risks	53,743.0	68,123.5	1,701.5	2,268.7
Annualized Net Cost Savings less Increased Safety Risks	7,651.8	7,986.1	242.3	266.0

Notes: In this and the following tables, the sum of individual items may not equal totals due to rounding. Negative signs used to indicate costs and increased safety risks. Present value estimates provided at seven and three percent discount rates per OMB guidance.

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS—LOW SCENARIO

[Presented in thousands of dollars]

Impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Cost Savings	$44,274.1	$56,404.8	$1,850.3	$2,449.5

has shown that there is uncertainty and variation with the number of planned launches that result in actual launches on annual basis.

[198] *See* discussion in the FSS preamble section.

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS—LOW SCENARIO—Continued

[Presented in thousands of dollars]

Impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Costs	−695.3	−828.0	−146.8	−180.6
Net Cost Savings	43,578.8	55,576.7	1,703.5	2,268.9
Annualized Net Cost Savings	6,204.6	6,515.3	242.5	266.0
Increased Safety Risks	−143.8	−179.6	.....	.....
Net Cost Savings *less* Increased Safety Risks	43,435.0	55,397.2	1,703.5	2,268.9
Annualized Net Cost Savings less Increased Safety Risks	6,184.2	6,494.2	242.5	266.0

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS—HIGH SCENARIO

[Presented in thousands of dollars]

Impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Cost Savings	$64,993.7	$81,979.8	$1,878.4	$2,487.5
Costs	−769.6	−914.8	−179.2	−219.4
Net Cost Savings	64,224.1	81,065.0	1,699.3	2,268.1
Annualized Net Cost Savings	9,144.1	9,503.3	241.9	265.9
Increased Safety Risks	−172.5	−214.3	.....	.....
Net Cost Savings *less* Increased Safety Risks	64,051.6	80,850.7	1,699.3	2,268.1
Annualized Net Cost Savings less Increased Safety Risks	9,119.5	9,478.2	241.9	265.9

The following table summarizes quantified impacts by provision category for the primary estimate (see the *Regulatory Impact Analysis* in the docket for tables presenting low and high estimates of quantified impacts by provision category).

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS BY PROVISION BASE SCENARIO—PRIMARY ESTIMATE

[Presented in thousands of dollars]

Provision category/impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Waiver Avoidance:				
—Definition of "Launch"	$23.7	$32.1	$7.5	$10.1
—Waterborne Vessel Hazard Areas	47.5	64.2	14.9	20.2
—Waiver for 48 Hour Readiness	29.7	40.1	9.3	12.6
System Safety Program—Safety Official	28.4	38.4	33.3	45.0
Duration of a Vehicle License	36.6	49.4	76.1	102.8
Readiness—Elimination of pre-launch meeting 15 days prior	860.7	1,169.5	155.9	211.8
Flight Safety System—Not required for all launches	52,618.2	66,554.4	1,453.9	1,912.7
Flight Safety Analysis no longer required for hybrids	34.4	46.7	4.4	6.0
Neighboring Operations *	873.6	1,087.4	.....	.....
Ground Hazard Analysis	81.9	110.7	108.8	147.0
Total Cost Savings	54,634.8	69,193.0	1,864.2	2,468.3
Payload Review and Determination	−52.5	−71.2	−54.0	−73.4
Safety criteria	−55.3	−64.1	.....	.....
Flight Hazard Analysis	−56.9	−68.0	−15.9	−19.0
Flight Abort—Flight Safety Limits Constraint	58.5	79.0	.....	.....
Flight Safety Limit Analysis	−114.0	−143.3	.....	.....
Far-field Overpressure Blast Effects Analysis	−2.9	−3.9	.....	.....
Safety-Critical System Design	−19.3	−26.1	.....	.....
Ground Hazard Analysis	−42.4	−57.3	−19.8	−26.8

SUMMARY OF 10-YEAR QUANTIFIED SAVINGS, COSTS AND NET IMPACTS BY PROVISION BASE SCENARIO—PRIMARY ESTIMATE—Continued

[Presented in thousands of dollars]

Provision category/impact	Industry present value (7%)	Industry present value (3%)	FAA present value (7%)	FAA present value (3%)
Waivers for Neighboring Operations Personnel	−171.5	−192.9	−54.0	−60.7
Modification Costs for Existing Licenses	−160.2	−166.4	−19.0	−19.8
Total Costs	−733.3	−872.2	−162.7	−199.6
Net Cost Savings	53,901.5	68,320.7	1,701.5	2,268.7
Annualized Net Cost Savings	7,674.4	8,009.3	242.3	266.0
Increased Safety Risks: Neighboring Operations*	−158.5	−197.3	.....	.....
Net Cost Savings *less* Increased Safety Risks	53,743.0	68,123.5	1,701.5	2,268.7
Annualized Net Cost Savings less Increased Safety Risks	7,651.8	7,986.1	242.3	266.0

Table notes: The sum of individual items may not equal totals due to rounding. Negative signs used to indicate costs and increased safety risks in this table. Present value estimates are provided at seven and three percent discount rates per OMB guidance.

*Changes to *Neighboring Operations* requirements result in net savings are less increased safety risks.

The FAA also expects industry will gain additional unquantified savings and benefits from the final rule, because the rule provides flexibility and scalability through performance-based requirements that will reduce the future cost of innovation and improve the efficiency and productivity of U.S. commercial space transportation.

The following table summarizes some of the changes that will result in unquantified savings.

UNQUANTIFIED SAVINGS

Change	Savings
Time Frames	The rule revises time frames in parts 404, 413, 414, 415, 417, 420, 431, 437, and 440 that may be burdensome for some operators. This will increase flexibility by allowing an operator the option to propose alternative time frames that better suit its operations. Eligible time frames include preflight and post-flight reporting among others listed in *Appendix A to Part 404—Alternative Time Frames.*
Safety Element Approval	The rule removes the requirement in part 414 to publish in the **Federal Register** the criteria upon which safety element approvals were based. The purpose of this notification requirement was to make clear the criteria and standards the FAA used to assess a safety element, particularly when no clear regulatory requirement existed and there could be other potential users of the safety approval. However, the FAA finds that this requirement is unnecessary, and has potentially discouraged applications for safety element approvals due to concerns that proprietary data may be disclosed. The FAA anticipates that removing this requirement will lead to increased use of safety element approvals, reducing industry burden, and potentially improving safety.
Mishaps	The rule provides the following mishap-related enhancements, which will better tailor mishap responses. • Replaces current part 400 mishap related definitions with a consolidated mishap definition (streamlines and reduces confusion). • Consolidates existing part 400 mishap/accident investigation and emergency response plan requirements into a single part (streamlines and reduces confusion). • Exempts pre-coordinated test-induced property damage from being a mishap (removes need to consider test-induced property damages from mishap requirements and likely results in fewer investigations of minor mishaps). • Eliminates the small $25,000 monetary threshold from the current mishap and accident investigation requirements potentially reducing the number of mishaps investigated that do not pose a threat to public safety. Minor damage that does not pose a threat to public safety can easily exceed the $25,000 monetary threshold, triggering potentially costly and burdensome notification, reporting, and investigation requirements. • Clarifies that a mishap is triggered by hazardous debris falling outside a planned landing site or designated hazard area. As a result, non-hazardous debris, no matter where it falls, will not be considered a mishap potentially avoiding unnecessary notification, reporting, and investigation requirements.
Toxics	The rule replaces part 417 toxic release hazard analysis requirements with performance-based regulations that will provide flexibility for operators to comply with the required risk criteria in varied and innovative ways for their ground operations.
Lightning protection requirement	The rule removes Appendix G to part 417, Natural and Triggered Lightning Flight Commit Criteria, and replaces it with the performance-based requirements. The current requirements are outdated, inflexible, overly conservative, and not explicitly applicable to RLVs and reentry vehicles.

The FAA analyzed the impacts of this rule based on the best available data at the time of writing. The FAA acknowledges that there are uncertainties with the savings and costs of this rule given the variety of operators, locations of operations, and the scale and complexity of operations. In addition, there is uncertainty regarding how operators holding an active license, or who have an accepted license application, will choose to operate during the five-year compliance period after the effective date of the rule (*i.e.,* choose to operate under part 450 or operate under the legacy parts 415 and 417 for expendable launch vehicles, part 431 for reusable launch vehicles, and part 435 for reentry vehicles). Lastly, there is uncertainty in the range and scope of future means of compliance, since this rule replaces many prescriptive regulations with performance-based rules, giving industry greater flexibility to develop means of compliance that meet their unique business objectives while maintaining public safety. All of these factors may result in variation of savings and costs for individual operators during and after the five-year compliance period. As previously discussed, the FAA will continue to work with industry to identify alternative means of compliance to provide future savings and efficiencies from this rule as industry continues to evolve.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.'' The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule would have a significant economic impact on a substantial number of small entities. If the determination is that it would, the agency must prepare a regulatory flexibility analysis as described in the RFA.

The FAA estimates this final rule will have a significant economic impact on a substantial number of small entities and therefore has performed the following Final Regulatory Flexibility Analysis in accordance with section 604(a)(1)–(a)(6).

(1) A statement of the need for, and objectives of, the rule.

The Department of Transportation was directed by the National Space Council in February 2018, and SPD–2 to streamline the regulations governing commercial space launch and reentry licensing. The goal of the streamlining rule is to create a single licensing regime for expendable and reusable launch vehicles and reentry vehicles.

The purpose of the final rule is to streamline and simplify the licensing of launch and reentry operations by relying on performance-based regulations rather than prescriptive regulations. This action consolidates and revises multiple commercial space launch and reentry regulations addressing licensing into a single regulatory part that states safety objectives to be achieved for the launch of suborbital and orbital expendable and reusable launch vehicles, and the reentry of reentry vehicles. This action also enables flexible time frames, removes unnecessarily burdensome ground safety regulations, redefines when launch begins to allow specified pre-flight operations prior to license approval, and allows applicants to seek a license to launch from multiple sites. This rule is necessary to reduce the need to file and process waivers, improve clarity of the regulations, and relieve administrative and cost burdens on industry and the FAA. The intended effect of this action is to make commercial space transportation regulations more efficient and effective, while maintaining public safety.

(2) A statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.

Commenters indicated that the FAA only identified two small entities that will be affected by the rule and left out numerous small entities that will be affected. The FAA has reevaluated and identified at least five small entities that will be affected by the rule and indicates this fact in the description of small entities section in this Final Regulatory Flexibility Analysis.

An individual commenter also noted that beyond the small entities not addressed in the analysis as noted above, the FAA's proposal would also impact small companies that are subcontractors, suppliers, or service providers to licensed launch or reentry operators, both in regard to a particular event and in the activities of neighboring operations not involved in a particular licensed or permitted event.

The FAA finds these subcontractors, suppliers, or service providers to licensed launch and reentry operators are not directly impacted by the rule. The RFA requires an agency to perform a regulatory flexibility analysis of small entity impacts only when a rule directly regulates small entities. A commenter indicated that small State or local governmental jurisdictions might be affected by the rule and these were not mentioned by the FAA in the RFA. The commenter appeared to be referring to potential costs from environmental review practices and policies now being codified into rules. The FAA addresses concerns related to potential costs from this codification in the comment section of this preamble and finds that the potential costs are negligible.

An individual commenter claimed several proposed new flight safety requirements would impose complex and costly risk analyses on small entities, including the ''consequence protection'' requirement, the ''critical assets'' risk assessment requirement, and flight software requirements. Also, the commenter pointed out the duplicative or conflicting rules among overlapping Federal jurisdictions as creating a barrier for small startups.

The FAA finds the costs of these critical asset and consequence protection requirements will be small or nonexistent. Operators in remote locations will likely be able to avoid the higher costs of a highly reliable FSS by demonstrating through a CE_C analysis that the launch in question will not exceed a certain risk threshold. The initial CE_C analysis under § 450.101 that is estimated to cost $2,500 may relieve some operators from the expense of any FSS. If a determination is made that an FSS is necessary, further analysis under § 450.108 will be performed to determine the flight safety limits needed for the FSS. The FAA estimated the cost of the additional analysis to account for CE_C in the flight safety limit is $10,000. Of course, an operator could avoid these analysis costs simply by choosing to use a highly reliable FSS, but the FAA assumes that an operator would not perform these analyses if it expected that it would still need the most highly reliable FSS. The worst case would be that the operator would incur $12,500 in costs but still need an FSS, just not a highly reliable FSS. The final rule also allows an applicant to propose an alternative to CE_C that would measure

or mitigate the potential for a high consequence event by use of other safeguards.

The identification of critical assets and the analysis to determine how to protect the critical assets will be performed by the ranges for launches from Federal sites and by the FAA for launches from non-Federal sites. Therefore, small entities will not bear these costs.

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments.

The Chief Counsel for Advocacy of the Small Business Administration did not file comments in response to the proposed rule.

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.

The FAA identifies at least five licensees that would qualify as small businesses. The rule will have a large effect in terms of cost savings on some of these small businesses. In addition to the five operators, there are two licensees that will be affected by the rule that may fall under the small business threshold in terms of number of employees, but they are subsidiaries of large parent companies and therefore are not considered small businesses.

(5) A description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

The rule will result in a reduction in reporting requirements because there will be fewer requests for waivers to certain provisions, fewer requests to modify licenses when a safety officer changes, and fewer licenses having to be issued because there will be extension of RLV licenses up to five years. The documentation accompanying a ground hazard analysis for ELV operators will be reduced due to change in launch scope.

Some new requirements will result in additional reporting. This reporting includes the following:

(1) Paperwork associated with payload review and determination, and safety criteria analyses;

(2) Paperwork resulting from the flight safety limits analysis and the far-field overpressure blast effects analysis;

(3) Paperwork submitted by legacy license who would like to waive the higher conditional expected casualty level for neighboring operations under the current regulations, or the new ground safety requirements for RLV operators; and

(4) Paperwork costs for those operators who modify their licenses in the first five years to comply with the new regulations.

The paperwork costs are discussed in more detail in the Paperwork Reduction Analysis section of this preamble.

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

a. Factual, Policy, and Legal Reasons for Selecting the Adopted Alternative

The Commercial Space Launch Act of 1984, as amended and re-codified at 51 U.S.C. 50901–50923 (the Act), authorizes the Department of Transportation, and the FAA through delegation, to oversee, license, and regulate commercial launch and reentry activities, and the operation of launch and reentry sites as carried out by U.S. citizens or within the United States. Section 50905 directs the FAA to exercise this responsibility consistent with public health and safety, safety of property, and the national security and foreign policy interests of the United States. The FAA is authorized to regulate only to the extent necessary to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States. In addition, section 50903 requires that the FAA encourage, facilitate, and promote commercial space launches and reentries by the private sector.

This rulemaking streamlines and increases flexibility in the FAA's commercial space regulations. This action consolidates and revises multiple regulatory parts to apply a single set of licensing and safety regulations across several types of operations and vehicles. It also replaces many prescriptive regulations with performance-based rules, giving industry greater flexibility to develop means of compliance that maximize their business objectives while maintaining an equivalent level of safety to the agency's current regulations. Because this rulemaking amends the FAA's launch and reentry requirements, it falls under the authority delegated by the Act.

b. Alternatives Considered

The FAA considered three alternatives to the proposed rule. The FAA restates these alternatives below. The FAA did not receive comment convincing it that any of these alternatives would be better than the rule it proposed and is now finalizing.

i. No Change to Current Regulations

This alternative was not chosen because the current regulations are outdated, prescriptive, and do not adequately reflect industry current practices or technology development. The inefficiency of the licensing process due to current regulations risks stifling innovation and growth of the industry, especially for small operators.

ii. Propose a More Process-Based Regulatory Approach

With this alternative, the FAA would have proposed less detailed regulations that would have relied primarily on the outcome of an operator's system safety process to protect public safety. The FAA did not chose this alternative because it would have lacked regulatory clarity and hazard control flexibility. System safety process is one method to derive hazard controls; however, there are other hazard control strategies that are more appropriate for some operations. Specifically, physical containment, wind weighting, and, most importantly, flight abort are often sufficient. Part 450 incorporates the flexibility of part 431, but acknowledges the acceptability of other hazard control strategies. Part 450 also builds on the precedent set by part 431's limits on the foreseeable consequences of a failure in terms of conditional expected casualties and establishes a less stringent threshold.With this final rule, the FAA declines to adopt this alternative.

iii. Propose a Defined Modular Application Process

With this alternative, the FAA would have proposed similar safety requirements but would have added a more defined incremental or modular application process. The final rule enables an incremental application process, but does not define one with explicit modules and time frames. This alternative was not chosen because the FAA has no experience with an incremental or modular application process with which to base a rule. In addition, a more defined incremental or modular application process may be less flexible and scalable and therefore more burdensome to small operators.

The FAA expects this final rule will provide regulatory relief to small entities from current prescriptive requirements and result in net savings. Accordingly, the FAA declines to adopt this alternative.

c. Cost Savings to Small Entities

The following sections identifies key provisions of the rule that minimize impacts to and expand flexibilities for small entities.

i. Readiness—Elimination of Pre-Launch Meeting 15 Days Prior (§ 450.155)

ELV operators might save $4,683 per avoided launch readiness meeting; however, this assumes the average number of people at each meeting would be 25 and this might not apply to a small business.

ii. Flight Safety System—Not Required for All Launches (§ 450.145)

For launches for which an FSS would not be required under the proposal, ELV operators might save $100,000 to $680,000 per launch and RLV operators might save $20,000 per launch vehicle.

ELV operators might save between $479,000 and $1.4 million in non-recurring costs and RLV operators might save approximately $375,000 for new FSS designs by not having to incur all the research, design, testing, materials, and installation costs for an FSS. This is likely to benefit small operators launching from remote sites.

iii. Ground Hazard Analysis (§ 450.185)

An ELV operator might save approximately $28,026 per application by not having to do a ground hazard analysis under this final rule.

d. Costs to Small Entities

The following sections identify provisions of the rule that might result in additional costs for small entities. However, the rule provides a compliance period of five years for holders of current licenses at the effective date of the final rule and those who have an accepted application within 90 days of the effective date of the final rule. This will provide small operators more time to comply with the final rule and will reduce costs.

i. Payload Review and Determination (§ 450.43)

The final rule could cause small operators to incur about $206 more per launch than due to additional payload review and determination costs.

ii. Flight Hazard Analysis (§ 450.107)

Operators who do not need FSS, and choose to operate without one, will have to perform a flight hazard analysis. RLV operators currently do flight hazard analyses, while ELV operators do not. To save the costs of an FSS, an ELV operator will have to use another hazard control strategy which will likely be a flight hazard analysis. In the regulatory impact analysis, two small businesses have to perform a flight hazard analysis. However, the cost savings of not having to have an FSS will far exceed the costs of the flight hazard analysis.

iii. Flight Abort (§ 450.108(d)) Flight Safety Limits Constraint

Some operators will choose to do a CE_C analysis voluntarily as part of the flight safety limits analysis so they can expand the area their flights can pass through. These operators would only do this additional analysis if they expected the benefit to exceed the cost. The estimated voluntary cost of $10,000 per license could be incurred by small businesses.

iv. Far-Field Overpressure Blast Effects Analysis (§ 450.137)

Additional costs are $330 per application.

v. Safety-Critical System Design (§ 450.143)

Additional documentation costs are $1,649 per application.

vi. Ground Hazard Analysis (§ 450.185)

RLV applicants might incur about $7,254 more per application due to having to perform ground hazard analyses under the final rule.

As previously discussed, the FAA provides a compliance period of five years in the final rule for holders of current licenses at the effective date of the final rule and those who have an accepted application within 90 days of the effective date of the final rule. This will give all businesses, including the small operators, more time to comply with the final rule. This will reduce the burden on small entities.

C. 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, if 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 serve as the basis for U.S. standards. The FAA has assessed the potential effect of this final rule and determined that it will not create unnecessary obstacles to the foreign commerce of the United States.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (in 1995 dollars) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.'' The threshold after adjustment for inflation is $150 million using the most current annual (2017) Implicit Price Deflator for Gross Domestic Product from the U.S. Bureau of Economic Analysis. This final rule does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

E. 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 proposed consolidation of two existing information collection requirements, previously approved under OMB Control Numbers 2120–0608 and 2120–0643, under a new OMB control number. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA will submit the proposed information collection requirements to OMB for its review. In addition, the FAA has published a separate notice of the proposed requirements for public comment, and has included the notice in the docket for this rulemaking. The notice includes instructions on how to submit comments specifically to the proposed information collection requirements. Additional details on assumptions and

calculations used in this section are presented in the Preliminary Regulatory Impact Analysis available in the docket of this rulemaking. The following estimates are included in the total savings and costs summarized in the Regulatory Evaluation section and considered in the Regulatory Flexibility Determination section of this proposed rule.

Because the FAA is allowing a five year compliance period for existing operators holding a license under parts 417, 431, or 435, OMB Control Numbers 2120–0608 and 2120–0643 will continue to be renewed for five years. After five years, all operators are expected to comply with part 450 and the new OMB number for collections.

Summary: The FAA proposes to consolidate under a new part 450, the requirements currently contained in parts 415 and 417 for the launch of an ELV, in part 431 for the launch and reentry of an RLV, and in part 435 for the reentry of a reentry vehicle other than an RLV. The result of this effort will be streamlined regulations designed to be more flexible and scalable, with reduced timelines and minimal duplicative jurisdiction. The net result will be reduced paperwork for operators, although for some provisions paperwork would increase.

Use: The information would be used by FAA to evaluate the launch and reentry operators' applications and to ensure safety.

Paperwork Impact to Industry

Respondents: The information collection will potentially affect 12 operators based on available data at the time of writing.

Annual Burden Estimate: Most changes in part 450 will result in a reduction in paperwork burden. The paperwork associated with industry requesting waivers to certain provisions will be alleviated. Paperwork associated with industry requesting license modifications would also be reduced because an operator will not have to modify a license if the specific safety official were to change. In addition, with the extension of RLV licenses to up to five years, it is likely that fewer licenses will be issued, resulting in less paperwork. Due to the change in launch scope, the documentation accompanying a ground hazard analysis for ELV operators would be reduced.

Industry Cost Savings

The following table indicates the frequency of responses, the estimated time per response, the burdened wage rate, annual hours, and the cost for each cost saving provision. Response frequency is provided for the estimated number of waivers avoided (§ 450.3), estimated reduction in annual number of licenses modified (§ 450.103), estimated reduction in annual license renewals, and estimated annual number of launches for which there would be a reduction in ground hazard analysis paperwork (§ 450.185). An estimated time for each response is also indicated below, as are burdened hourly wage rates for the specific personnel associated with each provision and annual hours and total cost savings.

INDUSTRY PAPERWORK COST SAVINGS

Description	Response frequency	Estimated time per response (hours)	Industry wage rate	Annual hours	Cost savings
Waiver Avoidance (§ 450.3)	17	20	$101.52	340	$34,518
System Safety Program—Safety Official (§ 450.103)	5.6	24	72.40	134.4	9,731
Duration of a Vehicle License (§ 450.7)	1.2	126.5	82.43	151.8	12,513
Ground Hazard Analysis (§ 450.185)	1	340	82.43	340	28,026
Total Annual Savings	24.8			966	84,788

Cost savings includes paperwork related to waivers avoided due to the definition of ''launch,'' waterborne vessel protection, and removal of the 48-hour readiness requirement.

Industry Paperwork Burden

Other changes will result in an increase in paperwork burden. The Payload Review and Determination section (§ 450.43) adds requirements for applicants to provide explosive potential of payload materials, alone and in combination with other materials on the payload for launches, as well as the appropriate transit time to final orbit for payloads with significant transit time after release from the vehicle. The FAA is adding requirements for ground hazard analysis (§ 450.185) for RLV launches. The provisions that will lead to additional paperwork burdens are listed in the table below. The final rule requires RLVs to submit information to the FAA.

The table below indicates the frequency of responses, estimated time per response, burdened hourly wage rate, annual hours, and the cost for each provision that would add burden. An estimated time per response is also indicated below, as are burdened hourly wage rates for the specific personnel associated with each provision and annual hours and total cost savings.

INDUSTRY PAPERWORK BURDEN

Description	Response frequency	Estimated time per response (hours)	Industry wage rate	Annual hours	Cost
Explosive Potential (§ 450.43)	82	2	$82.43	164	$13,519
Transit time (§ 450.43)	82	0.5	82.43	41.0	3,380
Ground Hazard Analysis (§ 450.185)	2	88	82.43	176	14,508
Safety criteria (§ 450.101(c))	4	60.66	82.43	80.88	6,667
Flight Hazard Analysis (§ 450.107)	2	53	82.43	106.67	8,793
Flight Abort (§ 450.108(d)) Flight Safety Limits Constraint	2	121	82.43	242.63	20,000
Flight Safety Limit Analysis (§ 450.123)	12	58	82.43	692	57,042
Far-field Overpressure Blast Effects Analysis (§ 450.137)	3	4	82.43	12	989

INDUSTRY PAPERWORK BURDEN—Continued

Description	Response frequency	Estimated time per response (hours)	Industry wage rate	Annual hours	Cost
Safety-Critical System Design	4	20	82.43	80	6,594
Waivers for Neighboring Operations Personnel	18.9	20	101.52	378	38,375
Modification Costs for Existing Licenses	3	693	82.43	693	57,124
Records set up, record, archive	82	4	89.72	328	29,429
Records retrieve and present	1	8	74.15	8	593
Total Cost Burden	298			3,002	257,012

The following table summarizes the industry total annual paperwork savings, total annual paperwork burden and the net annual paperwork savings.

INDUSTRY NET PAPERWORK SAVINGS

Description	Annual hours	Cost savings
Total Annual Savings	966	$84,787
Total Annual Burden	3,002	257,012
Net Annual Burden	2,036	172,225

Paperwork Burden to the Federal Government

The following tables summarizes FAA paperwork savings and burden. Similar to industry burden savings, the FAA receives burden relief from waivers avoided due to the definition of ''launch,'' waterborne vessel protection, and removal of the 48-hour readiness requirement. Other provisions the FAA receives relief from and provisions that will impose additional paperwork burden to the FAA are detailed in the tables below. See the Regulatory Impact Analysis available in the docket for more details on these estimates and calculations.

Description	Estimated time per response (hours)	FAA wage rate	Annual hours	Cost savings
FAA Paperwork Cost Savings				
Waiver Avoidance (§ 450.3)	7.5	$85.17	127.5	$10,859
System Safety Program—Safety Official (§ 450.103)	24	84.79	134.4	11,396
Duration of a Vehicle License (§ 450.7)	253.5	85.54	304.2	26,021
Ground Safety (§ 450.185)	439	84.79	439	37,223
Total Annual Savings			1,005	85,499
FAA Paperwork Burden				
Explosive Potential (§ 450.43)	2.0	84.79	164	13,906
Transit time (§ 450.43)	0.5	84.79	41	3,476
Ground Safety (§ 450.185)	40	84.79	80	6,783
Flight Hazard Analysis (§ 450.107)	47	78.27	31	2,452
Waivers for Neighboring Operations Personnel	8	85.17	142	12,094
Modification Costs for Existing Licenses	80	84.79	80	6,783
Records retrieve and present	20	84.79	20	1,696
Total Annual Burden			558	47,191

FAA NET PAPERWORK SAVINGS

Description	Annual hours	Cost savings
Total Annual Savings	1,005	$85,499
Total Annual Burden	558	47,191
Net Annual Savings	447	38,308

Individuals and organizations may send comments on the information collection requirement to the address listed in the **ADDRESSES** section at the beginning of this preamble by March 10, 2021. Comments also should be submitted to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Desk Officer for FAA, New Executive Building, Room 10202, 725 17th Street NW, Washington, DC 20053.

F. International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to these proposed regulations.

G. Environmental Analysis

FAA Order 1050.1 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 FAA Order 1050.1 paragraph 5–6.6 and involves no extraordinary circumstances.

V. Executive Order Determinations

A. Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs

This final rule is considered an E.O. 13771 deregulatory action. Details on the estimated cost savings of this final rule can be found in the rule's economic analysis.

B. Executive Order 13132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order 13132, ''Federalism.'' The agency 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, does not have federalism implications.

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

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

D. Executive Order 13609, International 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 not affect international regulatory cooperation.

VI. How To Obtain Additional Information

Rulemaking Documents

An electronic copy of a rulemaking document may be obtained by using the internet—

1. Search the Federal eRulemaking Portal at *http://www.regulations.gov;*

2. Visit the FAA's Regulations and Policies web page at *http://www.faa.gov/regulations_policies/*; or

3. Access the Government Printing Office's web page at *http://www.gpo.gov/fdsys/*.

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

Comments Submitted to the Docket

Comments received may be viewed by going to *http://www.regulations.gov* and following the online instructions to search the docket number for this action. Anyone may search the electronic form of all comments received into any of the FAA's dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.).

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 *http://www.faa.gov/regulations_policies/rulemaking/sbre_act/*.

List of Subjects

14 CFR Part 401

Organization and functions (Government agencies), Space Transportation and exploration.

14 CFR Part 404

Administrative practice and procedure, Space transportation and exploration.

14 CFR Part 413

Confidential business information, Space transportation and exploration.

14 CFR Part 414

Airspace, Aviation safety, Space transportation and exploration.

14 CFR Part 415

Aviation safety, Environmental protection, Space transportation and exploration.

14 CFR Part 417

Aircraft, Aviation safety, Reporting and recordkeeping requirements, Space transportation and exploration.

14 CFR Part 420

Environmental protection, Reporting and recordkeeping requirements, Space transportation and exploration.

14 CFR Part 431

Aviation safety, Environmental protection, Investigations, Reporting and recordkeeping requirements, Space transportation and exploration.

14 CFR Part 435

Aviation safety, Environmental protection, Investigations, Reporting and recordkeeping requirements, Space transportation and exploration.

14 CFR Part 437

Aircraft, Aviation safety, Reporting and recording keeping requirements, Space transportation and exploration.

14 CFR Part 440

Indemnity payments, Insurance, Reporting and recordkeeping requirements, Space transportation and exploration.

14 CFR Part 450

Aircraft, Aviation safety, Environmental protection, Investigations, Reporting and recordkeeping requirements, Space transportation and exploration.

In consideration of the foregoing, the Federal Aviation Administration amends chapter III for commercial space transportation rules of title 14, Code of Federal Regulations as follows:

PART 401—ORGANIZATION AND DEFINITIONS

■ 1. The authority citation for part 401 continues to read as follows:

Authority: 51 U.S.C. 50101–50923.

■ 2. Amend § 401.5 by revising the introductory text to read as follows:

§ 401.5 Definitions.

For the purposes of parts 415, 417, 431, 435, 440, and 460 of this chapter, the following definitions apply:

* * * * *

§ 401.5 [Removed and Reserved]

■ 3. Effective March 10, 2026, remove and reserve § 401.5.

■ 4. Add § 401.7 to read as follows:

§ 401.7 Definitions.

For the purposes of this chapter unless otherwise excepted, the following definitions apply:

Act means 51 U.S.C Subtitle V, Programs Targeting Commercial Opportunities, chapter 509—Commercial Space Launch Activities, 51 U.S.C. 50901–50923.

Anomaly means any condition during licensed or permitted activity that deviates from what is standard, normal, or expected, during the verification or operation of a system, subsystem, process, facility, or support equipment.

Associate Administrator means the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, or any person designated by the Associate Administrator to exercise the authority or discharge the responsibilities of the Associate Administrator.

Casualty means serious injury or death.

Casualty area means the area surrounding each potential debris or vehicle impact point where serious injuries, or worse, can occur.

Command control system means the portion of a flight safety system that includes all components needed to send a flight abort control signal to the on-board portion of a flight safety system.

Contingency abort means a flight abort with a landing at a planned location that has been designated in advance of vehicle flight.

Countdown means the timed sequence of events that must take place to initiate flight of a launch vehicle or reentry of a reentry vehicle.

Crew means any employee or independent contractor of a licensee, transferee, or permittee, or of a contractor or subcontractor of a licensee, transferee, or permittee, who performs activities in the course of that employment or contract directly relating to the launch, reentry, or other operation of or in a launch vehicle or reentry vehicle that carries human beings. A crew consists of flight crew and any remote operator.

Critical asset means an asset that is essential to the national interests of the United States. Critical assets include property, facilities, or infrastructure necessary for national security purposes, high priority civil space purposes, or assured access to space for national priority missions.

Critical payload means a payload and essential infrastructure directly supporting such a payload that is a critical asset that:

(1) Is so costly or unique that it cannot be readily replaced; or

(2) The time frame for its replacement would adversely affect the national interests of the United States.

Crossrange means the distance measured along a line whose direction is either 90 degrees clockwise (right crossrange) or counter-clockwise (left crossrange) to the projection of a vehicle's planned nominal velocity vector azimuth onto a horizontal plane tangent to the ellipsoidal Earth model at the vehicle's sub-vehicle point. The terms right crossrange and left crossrange may also be used to indicate direction.

Deorbit means the flight of a vehicle that begins with the final command to commit to a perigee below 70 nautical miles (approximately 130 kilometers), and ends when all vehicle components come to rest on the Earth.

Disposal means the return or attempt to return, purposefully, a launch vehicle stage or component, not including a reentry vehicle, from Earth orbit to Earth, in a controlled manner.

Downrange means the distance measured along a line whose direction is parallel to the projection of a vehicle's planned nominal velocity vector azimuth into a horizontal plane tangent to the ellipsoidal Earth model at the vehicle sub-vehicle point. The term downrange may also be used to indicate direction.

Effective casualty area means the aggregate casualty area of each piece of debris created by a vehicle failure at a particular point on its trajectory. The effective casualty area for each piece of debris is a modeling construct in which the area within which 100 percent of the population are assumed to be a casualty, and outside of which 100 percent of the population are assumed not to be a casualty.

Equivalent level of safety means an approximately equal level of safety as determined by qualitative or quantitative means.

Expected casualty means the mean number of casualties predicted to occur per flight operation if the operation were repeated many times.

Expendable launch vehicle means a launch vehicle whose propulsive stages are flown only once.

Experimental permit or *permit* means an authorization by the FAA to a person to launch or reenter a reusable suborbital rocket.

Explosive debris means solid propellant fragments or other pieces of a vehicle or payload that result from breakup of the vehicle during flight and that explode upon impact with the Earth's surface and cause overpressure.

Federal launch or reentry site means a launch or reentry site, from which launches routinely take place, that is owned and operated by the government of the United States.

Flight abort means the process to limit or restrict the hazards to public safety, and the safety of property, presented by a launch vehicle or reentry vehicle, including any payload, while in flight by initiating and accomplishing a controlled ending to vehicle flight.

Flight abort rules means the conditions under which a flight safety system must abort the flight to ensure compliance with the safety criteria in § 450.101.

Flight crew means crew that is on board a vehicle during a launch or reentry.

Flight hazard area means any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated to ensure compliance with the safety criteria in § 450.101.

Flight safety limit means criteria to ensure that public safety and critical assets are protected from the flight of a vehicle when a flight safety system functions properly.

Flight safety system means a system used to implement flight abort. A flight safety system includes any flight safety system located on board a launch or

reentry vehicle; any ground based command control system; any support system, including telemetry subsystems and tracking subsystems, necessary to support a flight abort decision; and the functions of any personnel who operate the flight safety system hardware or software.

Hazard control means a preventative measure or mitigation put in place for systems or operations to reduce the severity of a hazard or the likelihood of the hazard occurring.

Hazardous debris means any object or substance capable of causing a casualty or loss of functionality to a critical asset. Hazardous debris includes inert debris and explosive debris such as an intact vehicle, vehicle fragments, any detached vehicle component whether intact or in fragments, payload, and any planned jettison bodies.

Hazardous materials means hazardous materials as defined in 49 CFR 172.101.

Instantaneous impact point means a predicted impact point, following thrust termination of a vehicle.

Key flight safety event means a flight activity that has an increased likelihood of causing a failure compared with other portions of flight.

Launch means to place or try to place a launch vehicle or reentry vehicle and any payload or human being from Earth in a suborbital trajectory, in Earth orbit in outer space, or otherwise in outer space, including activities involved in the preparation of a launch vehicle or payload for launch, when those activities take place at a launch site in the United States.

Launch operator means a person who conducts or who will conduct the launch of a launch vehicle and any payload.

Launch or reentry system means the integrated set of subsystems, personnel, products, and processes that, when combined, carries out a launch or reentry.

Launch site means the location on Earth from which a launch takes place (as defined in a license the Secretary issues or transfers under this chapter) and necessary facilities at that location.

Launch vehicle means a vehicle built to operate in, or place a payload in, outer space or a suborbital rocket.

Launch window means an approved period of time during which the flight of a launch vehicle may be initiated.

Liftoff means any motion of the launch vehicle with intention to initiate flight.

Limits of a useful mission means the trajectory data or other parameters that bound the performance of a useful mission, including flight azimuth limits.

Mishap means any event, or series of events associated with a licensed or permitted activity resulting in any of the following:

(1) A fatality or serious injury (as defined in 49 CFR 830.2);

(2) A malfunction of a safety-critical system;

(3) A failure of the licensee's or permittee's safety organization, safety operations, safety procedures;

(4) High risk, as determined by the FAA, of causing a serious or fatal injury to any space flight participant, crew, government astronaut, or member of the public;

(5) Substantial damage, as determined by the FAA, to property not associated with licensed or permitted activity;

(6) Unplanned substantial damage, as determined by the FAA, to property associated with licensed or permitted activity;

(7) Unplanned permanent loss of a launch or reentry vehicle during licensed activity or permitted activity;

(8) The impact of hazardous debris outside the planned landing site or designated hazard area; or

(9) Failure to complete a launch or reentry as planned as reported in § 450.213(b).

Neighboring operations personnel means those members of the public located within a launch or reentry site, or an adjacent launch or reentry site, who are not associated with a specific hazardous licensed or permitted operation currently being conducted, but are required to perform safety, security, or critical tasks at the site and are notified of the operation.

Nominal means, in reference to launch vehicle performance, trajectory, or stage impact point, a launch vehicle flight where all vehicle aerodynamic parameters are as expected, all vehicle internal and external systems perform exactly as planned, and there are no external perturbing influences other than atmospheric drag and gravity.

Normal flight means the flight of a properly performing vehicle whose real-time vacuum instantaneous impact point does not deviate from the nominal vacuum instantaneous impact point by more than the sum of the wind effects and the three-sigma guidance and performance deviations in the uprange, downrange, left-crossrange, or right-crossrange directions.

Normal trajectory means a trajectory that describes normal flight.

Operating environment means an environment that a launch or reentry vehicle component will experience during its lifecycle. Operating environments include shock, vibration, thermal cycle, acceleration, humidity, thermal vacuum, or other environments relevant to system or material degradation.

Operation hazard means a hazard created by an operating environment or by an unsafe act.

Operation of a launch site means the conduct of approved safety operations at a permanent site to support the launching of vehicles and payloads.

Operation of a reentry site means the conduct of safety operations at a permanent site on Earth at which a reentry vehicle and its payload, if any, is intended to land.

Operator means a holder of a license or permit under 51 U.S.C. Subtitle V, chapter 509.

Orbital insertion means the point at which a vehicle achieves a minimum 70-nautical mile perigee based on a computation that accounts for drag.

Payload means an object that a person undertakes to place in outer space by means of a launch vehicle, including components of the vehicle specifically designed or adapted for that object.

Person means an individual or an entity organized or existing under the laws of a State or country.

Physical containment means a launch vehicle does not have sufficient energy for any hazards associated with its flight to reach the public or critical assets.

Physical electronic storage means a physical device that can store electronic documents and files including but not limited to an optical disc, a memory card, a USB flash drive, or an external hard drive.

Pilot means a flight crew member who has the ability to control, in real time, a launch or reentry vehicle's flight path.

Populated area means—

(1) An outdoor location, structure, or cluster of structures that may be occupied by people;

(2) Sections of roadways and waterways that are frequented by automobile and boat traffic; or

(3) Agricultural lands, if routinely occupied by field workers.

Probability of casualty means the likelihood that a person will suffer a serious injury or worse, including a fatal injury, due to all hazards from an operation at a specific location.

Public means, for a particular licensed or permitted launch or reentry, people that are not involved in supporting the launch or reentry and includes those people who may be located within the launch or reentry site, such as visitors, individuals providing goods or services not related to launch or reentry processing or flight, and any other operator and its personnel.

Reenter; reentry means to return or attempt to return, purposefully, a

reentry vehicle and its payload or human being, if any, from Earth orbit or from outer space to Earth.

Reentry operator means a person responsible for conducting the reentry of a reentry vehicle as specified in a license issued by the FAA.

Reentry site means the location on Earth where a reentry vehicle is intended to return. It includes the area within three standard deviations of the intended landing point (the predicted three-sigma footprint).

Reentry vehicle means a vehicle designed to return from Earth orbit or outer space to Earth substantially intact. A reusable launch vehicle that is designed to return from Earth orbit or outer space to Earth substantially intact is a reentry vehicle.

Reentry window means an approved period of time during which the reentry of a reentry vehicle may be initiated.

Remote operator means a crew member who—

(1) Has the ability to control, in real time, a launch or reentry vehicle's flight path; and

(2) Is not on board the controlled vehicle.

Reusable launch vehicle (RLV) means a launch vehicle that is designed to return to Earth substantially intact and therefore may be launched more than one time or that contains vehicle stages that may be recovered by a launch operator for future use in the operation of a substantially similar launch vehicle.

Risk means a measure that accounts for both the probability of occurrence of a hazardous event and the consequence of that event to persons or property.

Safety critical means essential to safe performance or operation. A safety-critical system, subsystem, component, condition, event, operation, process, or item, is one whose proper recognition, control, performance, or tolerance, is essential to ensuring public safety and the safety of property.

Service life means, for a safety-critical system component, the sum total of the component's storage life and operating life.

Sigma means a single standard deviation from a fixed value, such as a mean.

Software function means a collection of computer code that implements a requirement or performs an action. This includes firmware and operating systems.

Space flight participant means an individual, who is not crew, carried aboard a launch vehicle or reentry vehicle.

State and United States means, when used in a geographical sense, the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the United States Virgin Islands, Guam, and any other commonwealth, territory, or possession of the United States.

Suborbital rocket means a vehicle, rocket-propelled in whole or in part, intended for flight on a suborbital trajectory, and the thrust of which is greater than its lift for the majority of the rocket-powered portion of its ascent.

Suborbital trajectory means the intentional flight path of a launch vehicle, reentry vehicle, or any portion thereof, whose vacuum instantaneous impact point does not leave the surface of the Earth.

Sub-vehicle point means the location on an ellipsoidal Earth model where the normal to the ellipsoid passes through the vehicle's center of gravity.

System hazard means a hazard associated with a system and generally exists even when no operation is occurring.

Tether system means a device that contains launch vehicle hazards by physically constraining a launch vehicle in flight to a specified range from its launch point. A tether system includes all components, from the tether's point of attachment to the vehicle to a solid base, that experience load during a tethered launch.

Toxic hazard area means a region on the Earth's surface where toxic concentrations and durations may be greater than accepted toxic thresholds for acute casualty, in the event of a worst case release or maximum credible release scenario during launch or reentry.

Uncontrolled area is an area of land not controlled by a launch or reentry operator, a launch or reentry site operator, an adjacent site operator, or other entity by agreement.

Unguided suborbital launch vehicle means a suborbital rocket that does not contain active guidance or a directional control system.

United States citizen means:

(1) Any individual who is a citizen of the United States;

(2) Any corporation, partnership, joint venture, association, or other entity organized or existing under the laws of the United States or any State; and

(3) Any corporation, partnership, joint venture, association, or other entity which is organized or exists under the laws of a foreign nation, if the controlling interest in such entity is held by an individual or entity described in paragraph (1) or (2) of this definition. Controlling interest means ownership of an amount of equity in such entity sufficient to direct management of the entity or to void transactions entered into by management. Ownership of at least fifty-one percent of the equity in an entity by persons described in paragraph (1) or (2) of this definition creates a rebuttable presumption that such interest is controlling.

Uprange means the distance measured along a line that is 180 degrees to the downrange direction.

Useful mission means a mission that can attain one or more objectives.

Validation means an evaluation to determine that each safety measure derived from a system safety process is correct, complete, consistent, unambiguous, verifiable, and technically feasible. Validation ensures that the right safety measure is implemented, and that the safety measure is well understood.

Verification means an evaluation to determine that safety measures derived from a system safety process are effective and have been properly implemented. Verification provides measurable evidence that a safety measure reduces risk to acceptable levels.

Wind weighting safety system means equipment, procedures, analysis and personnel functions used to determine the launcher elevation and azimuth settings that correct for wind effects that an unguided suborbital launch vehicle will experience during flight.

Window closure means a period of time when launch or reentry is not permitted in order to avoid a collision with an object in orbit. A window closure may occur within a launch or reentry window, may delay the start of a window, or terminate a window early.

PART 404—REGULATIONS AND LICENSING REQUIREMENTS

■ 5. The authority citation for part 404 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

■ 6. Revise § 404.5 to read as follows:

§ 404.5 Filing a petition for waiver.

(a) A petition for waiver must be submitted at least 60 days before the proposed effective date of the waiver, unless the Administrator agrees to a different time frame in accordance with § 404.15.

(b) The petition for waiver must include:

(1) The specific section or sections of 14 CFR chapter III from which the petitioner seeks relief;

(2) The extent of the relief sought and the reason the relief is being sought;

(3) The reason why granting the request for relief is in the public interest and will not jeopardize the public

health and safety, safety of property, and national security and foreign policy interests of the United States; and

(4) Any additional facts, views, and data available to the petitioner to support the waiver request.

■ 7. Add § 404.15 to read as follows:

§ 404.15 Alternative Time Frames.

(a) *General.* Unless otherwise approved by the Administrator, an applicant, a licensee, a permittee, or a safety element approval holder must meet the time frames set forth in this chapter.

(b) *Request to change a time frame.* An applicant, a licensee, a permittee, or a safety element approval holder may file a written request to the FAA to propose an alternative time frame to any of the time frames included in the chapter III sections listed in Appendix A to part 404. The request must be—

(1) Emailed to *ASTApplications@faa.gov* in accordance with § 413.7; or

(2) Mailed to the Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Room 331, 800 Independence Avenue SW, Washington, DC 20591. Attention: Alternative Time Frame Request.

(c) *Administrator review.* The Administrator will review and make a decision or grant a request for an alternative time frame as follows:

(1) The FAA will conduct its review on a case-by-case basis, taking into account the complexity of the request, the timeliness of the request, and whether the requested alternative allows sufficient time for the FAA to conduct its review and make the requisite public health and safety, safety of property, and national security and foreign policy findings;

(2) The FAA will provide its decision in writing; and

(3) The FAA may grant the request, deny the request, or grant an alternative time frame that differs from what was requested.

■ 8. Add appendix A to part 404 the read as follows:

Appendix A to Part 404—Alternative Time Frames

A404.1 General

Alternative time frames. This appendix lists the sections and corresponding paragraphs in this chapter that provide the eligible time frames for an applicant, licensee, permittee, or safety element approval holder, as applicable, to request an alternative time frame.

TABLE A404.1—ELIGIBLE TIME FRAMES

Sections	Paragraphs
§ 404.5—Filing a petition for waiver	(a).
§ 413.23—License or permit renewal	(a).
§ 414.31—Safety element approval renewal	(a).
§ 420.57—Notifications	(d).
§ 437.89—Pre-flight reporting	(a), (b).
§ 440.15—Demonstration of compliance	(a)(1), (a)(2), (a)(3), (a)(4).
§ 450.169—Launch and Reentry Collision Avoidance Analysis Requirements	(f)(1).
§ 450.213—Pre-flight reporting	(b), (c), (d), (e).
§ 450.215—Post-flight reporting	(a)

PART 413—APPLICATION PROCEDURES

■ 9. The authority citation for part 413 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

■ 10. Revise § 413.1 to read as follows:

§ 413.1 Scope of this part.

(a) This part explains how to apply for a license or experimental permit. These procedures apply to all applications for obtaining a license or permit, transferring a license, and renewing a license or permit. In this part, the term application means either an application in its entirety, or a portion of an application for incremental review and determination in accordance with § 450.33 of this chapter.

(b) Use paragraphs (b)(1) through (7) in the following table to locate specific requirements:

Subject	Part
(1) Obtaining a Launch License (*only applications accepted before June 8, 2021*)	415
(2) License to Operate a Launch Site	420
(3) Launch and Reentry of a Reusable Launch Vehicle (RLV) (*only applications accepted before June 8, 2021*)	431
(4) License to Operate a Reentry Site	433
(5) Reentry of a Reentry Vehicle other than a Reusable Launch Vehicle (RLV) (*only applications accepted before June 8, 2021*)	435
(6) Experimental Permits	437
(7) Launch and Reentry License Requirements	450

■ 11. Effective March 10, 2026, futher amend § 413.1 by revising paragraphs (b)(1) through (4) and removing paragraphs (b)(5) through (7).

The revisions read read as follows:

§ 413.1 Scope of this part.

* * * * *

(b) * * *

Subject	Part
(1) License to Operate a Launch Site	420
(2) License to Operate a Reentry Site	433
(3) Experimental Permits	437
(4) Launch and Reentry License Requirements	450

■ 12. Amend § 413.7 by revising the section heading and paragraph (a)(3) to read as follows:

§ 413.7 Application submission.

(a) * * *

(3) For an application submitted by email, an applicant must send the application as an email attachment, or as a link to a secure server, to *ASTApplications@faa.gov.* The application and the email to which the application is attached or linked must also satisfy the following criteria:

(i) The email to which the application is attached or linked must be sent from an email address controlled by the person who signed the application or by an authorized representative of the applicant;

(ii) The email must identify each document that is included as an attachment or that is stored on a secure server; and

(iii) The electronic files must be date-stamped and have version control documentation.

* * * * *

■ 13. Amend § 413.11 by revising paragraph (a) to read as follows:

§ 413.11 Acceptance of an application.

* * * * *

(a) The FAA accepts the application and will initiate review; or

* * * * *

■ 14. Revise § 413.15 to read as follows:

§ 413.15 Review period.

(a) *Review period duration.* Unless otherwise specified in this chapter, the FAA reviews and makes a license or permit determination on an accepted application in accordance with the time frame specified in 51 U.S.C. 50905(a)(1). The FAA will establish the time frame for any incremental review and determination with an applicant on a case-by-case basis during pre-application consultation.

(b) *Review period tolled.* If an accepted application does not provide sufficient information to continue or complete the reviews or evaluations required by this chapter for a license, permit, or incremental determination, or an issue exists that would affect a determination, the FAA notifies the applicant, in writing, and informs the applicant of any information required to complete the application. If the FAA cannot review an accepted application because of lack of information or for any other reason, the FAA will toll the review period until the FAA receives the information it needs or the applicant resolves the issue.

(c) *Notice.* Except for applications under incremental review and determination in accordance with § 450.33, if the FAA does not make a decision in accordance with the time frame specified in 51 U.S.C. 50905(a)(1) for an accepted license application or 51 U.S.C. 50906(a) for an accepted permit application, the FAA informs the applicant, in writing, of any outstanding information needed to complete the review, or of any issues that would affect the decision.

■ 15. Amend § 413.21 by revising pargraphs (b) and (c) to read as follows:

§ 413.21 Denial of a license or permit application.

* * * * *

(b) If the FAA has denied an application in its entirety, the applicant may either—

(1) Attempt to correct any deficiencies identified and ask the FAA to reconsider the revised application, in which case the FAA has 60 days or the number of days remaining in the review period, whichever is greater, within which to reconsider the decision; or

(2) Request a hearing in accordance with part 406 of this chapter, for the purpose of showing why the application should not be denied.

(c) An applicant whose application is denied after reconsideration under paragraph (b)(1) of this section may request a hearing in accordance with paragraph (b)(2) of this section.

■ 16. Amend § 413.23 by revising paragraphs (a) and (d) to read as follows:

§ 413.23 License or permit renewal.

* * * * *

(a) *Eligibility.* (1) A licensee or permittee may apply to renew its license or permit by submitting to the FAA a written application for renewal at least 90 days before the license expires or at least 60 days before the permit expires, unless the Administrator agrees to a different time frame in accordance with § 404.15.

(2) A request to renew a licensed under parts 415, 431, and 435 may be granted with a non-standard duration so as not to exceed March 10, 2026.

* * * * *

(d) *Renewal of license or permit.* After the FAA finishes its reviews, the FAA issues an order modifying the expiration date of the license or permit. The FAA may impose additional or revised terms and conditions necessary to protect public health and safety and the safety of property and to protect U.S. national security and foreign policy interests. The renewal period for a license issued under parts 415, 431, or 435 of this chapter cannot extend beyond March 10, 2026.

* * * * *

■ 17. Effective March 10, 2026, § 413.23 is further amended by revising paragraphs (a) and (d) to read as follows:

§ 413.23 License or permit renewal.

* * * * *

(a) *Eligibility.* A licensee or permittee may apply to renew its license or permit by submitting to the FAA a written application for renewal at least 90 days before the license expires or at least 60 days before the permit expires, unless the Administrator agrees to a different time frame in accordance with § 404.15.

* * * * *

(d) *Renewal of license or permit.* After the FAA finishes its reviews, the FAA issues an order modifying the expiration date of the license or permit. The FAA may impose additional or revised terms and conditions necessary to protect public health and safety and the safety of property and to protect U.S. national security and foreign policy interests.

* * * * *

■ 18. Revise part 414 to read as follows:

PART 414—SAFETY ELEMENT APPROVALS

Sec.

Subpart A—General

414.1 Scope
414.3 Definitions.
414.5 Applicability.
414.7 Eligibility.

Subpart B—Application Procedures

414.9 Pre-application consultation.
414.11 Application.
414.13 Application separate from a vehicle operator license application.
414.15 Application concurrent with vehicle operator license application.
414.17 Confidentiality.
414.19 Processing the initial application.
414.21 Maintaining the continued accuracy of the initial application.

Subpart C—Safety Element Approval Review and Issuance

414.23 Technical criteria for reviewing a safety element approval application.
414.25 Terms and conditions for issuing a safety element approval; duration of a safety element approval.
414.27 Maintaining the continued accuracy of the safety element approval application.
414.29 Safety element approval records.
414.31 Safety element approval renewal.
414.33 Safety element approval transfer.
414.35 Monitoring compliance with the terms and conditions of a safety element approval.
414.37 Modification, suspension, or revocation of a safety element approval.

Subpart D—Appeal Procedures

414.41 Hearings in safety element approval actions.
414.43 Submissions; oral presentations in safety element approval actions.

414.45 Administrative law judge's recommended decision in safety element approval actions.

Authority: 51 U.S.C. 50901–50923.

Subpart A—General

§ 414.1 Scope.

This part establishes procedures for obtaining a safety element approval and renewing and transferring an existing safety element approval. Safety element approvals issued under this part may be used to support the application review for one or more vehicle operator license requests under other parts of this chapter.

§ 414.3 Definitions.

Safety element. For purposes of this part, a safety element is any one of the items or persons (personnel) listed in paragraphs (1) and (2) of the definition of ''safety element approval'' in this section.

Safety element approval. For purposes of this part, a safety element approval is an FAA document containing the FAA determination that one or more of the safety elements listed in paragraphs (1) and (2) of this definition, when used or employed within a defined envelope, parameter, or situation, will not jeopardize public health and safety or safety of property. A safety element approval may be issued independent of a license, and does not confer any authority to conduct activities for which a license is required under 14 CFR chapter III. A safety element approval does not relieve its holder of the duty to comply with all applicable requirements of law or regulation that may apply to the holder's activities.

(1) Launch vehicle, reentry vehicle, safety system, process, service, or any identified component thereof; or

(2) Qualified and trained personnel, performing a process or function related to licensed activities or vehicles.

§ 414.5 Applicability.

This part applies to an applicant that wants to obtain a safety element approval for any of the safety elements defined under this part and to persons granted a safety element approval under this part. Any person eligible under this part may apply to become the holder of a safety element approval.

§ 414.7 Eligibility.

(a) There is no citizenship requirement to obtain a safety element approval.

(b) You may be eligible for a safety element approval if you are—

(1) A designer, manufacturer, or operator of a launch or reentry vehicle or component thereof;

(2) The designer or developer of a safety system or process; or

(3) Personnel who perform safety-critical functions in conducting a licensed launch or reentry.

(c) A safety element approval applicant must have sufficient knowledge and expertise to show that the design and operation of the safety element for which safety element approval is sought qualify for a safety element approval.

(d) Only the safety elements defined under this part are eligible for a safety element approval.

Subpart B—Application Procedures

§ 414.9 Pre-application consultation.

The applicant must consult with the FAA before submitting an application. Unless the applicant or the FAA requests another form of consultation, consultation is oral discussion with the FAA about the application process and the potential issues relevant to the FAA's safety element approval decision.

§ 414.11 Application.

An applicant may submit an application for a safety element approval in one of two ways:

(a) Separate from a vehicle operator license application in accordance with § 414.13; or

(b) Concurrent with a vehicle operator license application in accordance with § 414.15.

§ 414.13 Application separate from a vehicle operator license application.

(a) An applicant must make an application in writing and in English. The applicant must file the application with the Federal Aviation Administration either by paper, by use of physical electronic storage, or by email in the following manner:

(1) For an application submitted on paper, an applicant must send two copies of the application to the Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Room 331, 800 Independence Avenue SW, Washington, DC 20591. Attention: Application Review.

(2) For an application submitted by use of physical electronic storage, the applicant must either mail the application to the address specified in paragraph (a)(1) of this section or hand-deliver the application to an authorized FAA representative. The application and the physical electronic storage containing the application must also satisfy all of the following criteria:

(i) The application must include a cover letter that is printed on paper and signed by the person who signed the application or by an authorized representative of the applicant;

(ii) The cover letter must identify each document that is included on the physical electronic storage; and

(iii) The physical electronic storage must be in a format such that its contents cannot be altered.

(3) For an application submitted by email, an applicant must send the application as an email attachment, or as a link to a secure server, to *ASTApplications@faa.gov*. The application and the email to which the application is attached must also satisfy the following criteria:

(i) The email to which the application is attached must be sent from an email address controlled by the person who signed the application or by an authorized representative of the applicant; and

(ii) The email must identify each document that is included as an attachment or that is stored on a secure server; and

(iii) The electronic files must be date-stamped and have version control documentation.

(b) The application must identify the following basic information:

(1) Name and address of the applicant.

(2) Name, address, and telephone number of any person to whom inquiries and correspondence should be directed.

(3) Safety element as defined under this part for which the applicant seeks a safety element approval.

(c) The application must contain the following technical information:

(1) A Statement of Conformance letter, describing the specific criteria the applicant used to show the adequacy of the safety element for which a safety element approval is sought, and showing how the safety element complies with the specific criteria.

(2) The specific operating limits for which the safety element approval is sought.

(3) The following as applicable:

(i) Information and analyses required under this chapter that may be applicable to demonstrating safe performance of the safety element for which the safety element approval is sought.

(ii) Engineering design and analyses that show the adequacy of the proposed safety element for its intended use, such that the use in a licensed launch or reentry will not jeopardize public health or safety or the safety of property.

(iii) Relevant manufacturing processes.

(iv) Test and evaluation procedures.

(v) Test results.

(vi) Maintenance procedures.

(vii) Personnel qualifications and training procedures.

(d) The application must be legibly signed, dated, and certified as true, complete, and accurate by one of the following:

(1) For a corporation, an officer or other individual authorized to act for the corporation in licensing or safety element approval matters.

(2) For a partnership or a sole proprietorship, a general partner or proprietor, respectively.

(3) For a joint venture, association, or other entity, an officer or other individual duly authorized to act for the joint venture, association, or other entity in licensing matters.

(e) Failure to comply with any of the requirements set forth in this section is sufficient basis for denial of a safety element approval application.

§ 414.15 Application concurrent with vehicle operator license application.

(a) An applicant for a vehicle operator license may also identify one or more sections of its application for which it seeks to obtain a safety element approval concurrently with a license. An applicant applying for a safety element approval concurrently with a license must—

(1) Meet the applicable requirements of part 450;

(2) Provide the information required in § 414.13(b)(3) and (c)(2) and (3); and

(3) Specify the sections of the license application that support the application for a safety element approval.

(b) The scope of the safety element approval will be limited to what the application supports. The technical criteria for reviewing a safety element submitted as part of a vehicle operator license application are limited to the applicable requirements of part 450.

§ 414.17 Confidentiality.

(a) To ensure confidentiality of data or information in the application, the applicant must—

(1) Send a written request with the application that trade secrets or proprietary commercial or financial data be treated as confidential, and include in the request the specific time frame confidential treatment is required.

(2) Mark data or information that require confidentiality with an identifying legend, such as ''Proprietary Information,'' ''Proprietary Commercial Information,'' ''Trade Secret,'' or ''Confidential Treatment Requested.'' Where this marking proves impracticable, attach a cover sheet that contains the identifying legend to the data or information for which confidential treatment is sought.

(b) If the applicant requests confidential treatment for previously submitted data or information, the FAA will honor that request to the extent practicable in case of any prior distribution of the data or information.

(c) Data or information for which confidential treatment is requested or data or information that qualifies for exemption under section 552(b)(4) of title 5, U.S.C., will not be disclosed to the public unless the Associate Administrator determines that withholding the data or information is contrary to the public or national interest.

§ 414.19 Processing the initial application.

(a) The FAA will initially screen an application to determine if the application is complete enough for the FAA to start the review.

(b) After completing the initial screening, the FAA will inform the applicant in writing of one of the following:

(1) The FAA accepts the application and will begin the reviews or evaluations required for a safety element approval determination under this part.

(2) The FAA rejects the application because it is incomplete or indefinite, making initiation of the reviews or evaluations required for a safety element approval determination under this part inappropriate.

(c) The written notice will state the reason(s) for rejection and corrective actions necessary for the application to be accepted. The FAA may return a rejected application to the applicant or may hold it until the applicant provides more information.

(d) The applicant may withdraw, amend, or supplement an application any time before the FAA makes a final determination on the safety element approval application by making a written request to the Associate Administrator. If the applicant amends or supplements the initial application, the revised application must meet all the applicable requirements under this part.

§ 414.21 Maintaining the continued accuracy of the initial application.

The applicant is responsible for the continuing accuracy and completeness of information provided to the FAA as part of the safety element approval application. If at any time after submitting the application, circumstances occur that cause the information to no longer be accurate and complete in any material respect, the applicant must submit a written statement to the Associate Administrator explaining the circumstances and providing the new or corrected information. The revised application must meet all requirements under § 414.13 or § 414.15.

Subpart C—Safety Element Approval Review and Issuance

§ 414.23 Technical criteria for reviewing a safety element approval application.

The FAA will determine whether a safety element is eligible for and may be issued a safety element approval. The FAA will base its determination on performance-based criteria, against which it may assess the effect on public health and safety and on safety of property, in the following hierarchy:

(a) FAA or other appropriate Federal regulations.

(b) Government-developed or adopted standards.

(c) Industry consensus performance-based criteria or standard.

(d) Applicant-developed criteria. Applicant-developed criteria are performance standards customized by the manufacturer that intends to produce the system, system component, or part. The applicant-developed criteria must define—

(1) Design and minimum performance;

(2) Quality assurance system requirements;

(3) Production acceptance test specifications; and

(4) Continued operational safety monitoring system characteristics.

§ 414.25 Terms and conditions for issuing a safety element approval; duration of a safety element approval.

(a) The FAA will issue a safety element approval to an applicant that meets all the requirements under this part.

(b) The scope of the safety element approval will be limited by the scope of the safety demonstration contained in the application on which the FAA based the decision to grant the safety element approval.

(c) The FAA will determine specific terms and conditions of a safety element approval individually, limiting the safety element approval to the scope for which it was approved. The terms and conditions will include reporting requirements tailored to the individual safety element approval.

(d) A safety element approval is valid for five years and may be renewed.

§ 414.27 Maintaining the continued accuracy of the safety element approval application.

(a) The holder of a safety element approval must ensure the continued accuracy and completeness of representations contained in the safety element approval application, on which the approval was issued, for the entire term of the safety element approval.

(b) If any representation contained in the application that is material to public health and safety or safety of property ceases to be accurate and complete, the safety element approval holder must prepare and submit a revised application according to § 414.13 or § 414.15 under this part. The safety element approval holder must point out any part of the safety element approval or the associated application that would be changed or affected by a proposed modification. The FAA will review and make a determination on the revised application under the terms of this part.

§ 414.29 Safety element approval records.

The holder of a safety element approval must maintain all records necessary to verify that the holder's activities are consistent with the representations contained in the application for which the approval was issued for the duration of the safety element approval plus one year.

§ 414.31 Safety element approval renewal.

(a) *Eligibility.* A holder of a safety element approval may apply to renew it by sending the FAA a written application at least 90 days before the expiration date of the approval, unless the Administrator agrees to a different time frame in accordance with § 404.15.

(b) *Application.* (1) A safety element approval renewal application must meet all the requirements under § 414.13 or § 414.15.

(2) The application may incorporate by reference information provided as part of the application for the expiring safety element approval or any modification to that approval.

(3) Any proposed changes in the conduct of a safety element for which the FAA has issued a safety element approval must be described and must include any added information necessary to support the fitness of the proposed changes to meet the criteria upon which the FAA evaluated the safety element approval application.

(c) *Review of application.* The FAA conducts the reviews required under this part to determine whether the safety element approval may be renewed. We may incorporate by reference any findings that are part of the record for the expiring safety element approval.

(d) *Grant of safety element approval renewal.* If the FAA makes a favorable safety element approval determination, the FAA issues an order that amends the expiration date of the safety element approval or issues a new safety element approval. The FAA may impose added or revised terms and conditions necessary to protect public health and safety and the safety of property.

(e) *Written notice.* The FAA will provide written notice to the applicant of its determination on the safety element approval renewal request.

(f) *Denial of a safety element approval renewal.* If the FAA denies the renewal application, the applicant may correct any deficiency the FAA identified and request a reconsideration of the revised application. The applicant also has the right to appeal a denial as set forth in subpart D of this part.

§ 414.33 Safety element approval transfer.

(a) Only the FAA may approve a transfer of a safety element approval.

(b) Either the holder of a safety element approval or the prospective transferee may request a safety element approval transfer.

(c) Both the holder and prospective transferee must agree to the transfer.

(d) The person requesting the transfer must submit a safety element approval application according to § 414.13 or § 414.15, must meet the applicable requirements of this part, and may incorporate by reference relevant portions of the initial application.

(e) The FAA will approve a transfer of a safety element approval only after all the approvals and determinations required under this chapter for a safety element approval have been met. In conducting reviews and issuing approvals and determinations, the FAA may incorporate by reference any findings made part of the record to support the initial safety element approval determination. The FAA may modify the terms and conditions of a safety element approval to reflect any changes necessary because of a safety element approval transfer.

(f) The FAA will provide written notice to the person requesting the safety element approval transfer of our determination.

§ 414.35 Monitoring compliance with the terms and conditions of a safety element approval.

Each holder of a safety element approval must allow access by, and cooperate with, Federal officers or employees or other individuals authorized by the Associate Administrator to inspect manufacturing, production, testing, or assembly performed by a holder of a safety element approval or its contractor. The FAA may also inspect a safety element approval process or service, including training programs and personnel qualifications.

§ 414.37 Modification, suspension, or revocation of a safety element approval.

(a) *The safety element approval holder.* The safety element approval holder may submit an application to the FAA to modify the terms and conditions of the holder's safety element approval. The application must meet all the applicable requirements under this part. The FAA will review and make a determination on the application using the same procedures under this part applicable to an initial safety element approval application. If the FAA denies the request to modify a safety element approval, the holder may correct any deficiency the FAA identified and request reconsideration. The holder also has the right to appeal a denial as set forth in subpart D of this part.

(b) *The FAA.* If the FAA finds it is in the interest of public health and safety, safety of property, or if the safety element approval holder fails to comply with any applicable requirements of this part, any terms and conditions of the safety element approval, or any other applicable requirement, the FAA may—

(1) Modify the terms and conditions of the safety element approval; or

(2) Suspend or revoke the safety element approval.

(c) *Effective date.* Unless otherwise stated by the FAA, any modification, suspension, or revocation of a safety element approval under paragraph (b)—

(1) Takes effect immediately; and

(2) Continues in effect during any reconsideration or appeal of such action under this part.

(d) *Notification and right to appeal.* If the FAA determines it is necessary to modify, suspend, or revoke a safety element approval, we will notify the safety element approval holder in writing. If the holder disagrees with the FAA's determination, the holder may correct any deficiency the FAA identified and request a reconsideration of the determination. The applicant also has the right to appeal the determination as set forth in subpart D of this part.

Subpart D—Appeal Procedures

§ 414.41 Hearings in safety element approval actions.

(a) The FAA will give the safety element approval applicant or holder, as appropriate, written notice stating the reason for issuing a denial or for

modifying, suspending, or revoking a safety element approval under this part.

(b) A safety element approval applicant or holder is entitled to a determination on the record after an opportunity for a hearing.

§ 414.43 Submissions; oral presentations in safety element approval actions.

(a) Determinations in safety element approval actions under this part will be made on the basis of written submissions unless the administrative law judge, on petition or on their own initiative, determines that an oral presentation is required.

(b) Submissions must include a detailed exposition of the evidence or arguments supporting the petition.

(c) Petitions must be filed as soon as practicable, but in no event more than 30 days after issuance of decision or finding under § 414.37.

§ 414.45 Administrative law judge's recommended decision in safety element approval actions.

(a) The Associate Administrator, who will make the final decision on the matter at issue, will review the recommended decision of the administrative law judge. The Associate Administrator will make such final decision within 30 days of issuance of the recommended decision.

(b) The authority and responsibility to review and decide rests solely with the Associate Administrator and may not be delegated.

PART 415—LAUNCH LICENSE

■ 19. The authority citation for part 415 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

PART 415—[REMOVED AND RESERVED]

■ 20. Effective March 10, 2026, remove and reserve part 415.

■ 21. Revise § 415.1 to read as follows:

§ 415.1 Applicability and scope.

(a) *Applicability.* This part applies to the following:

(1) Licenses issued under this part before June 8, 2021; and

(2) Licenses issued on or after June 8, 2021, if the FAA accepted the application under § 413.11 of this chapter before that date.

(b) *Scope.* This part prescribes requirements for obtaining a license to launch an expendable launch vehicle and post-licensing requirements with which a licensee must comply to remain licensed. Requirements for preparing a license application are in part 413 of this subchapter.

■ 22. Add § 415.2 to read as follows:

§ 415.2 Licenses issued under this part.

(a) *Definitions.* For the purposes of this part, the definitions of § 401.5 of this chapter apply.

(b) *Compliance with part 450 of this chapter.* Operations under this part must comply with launch and reentry collision avoidance requirements in § 450.169 of this chapter and critical asset protection requirements in §§ 450.101(a)(4) and (b)(4) of this chapter.

■ 23. Amend § 415.3 by adding paragraph (c) to read as follows:

§ 415.3 Types of launch licenses.

* * * * *

(c) Notwithstanding the duration for a license established in paragraphs (a) and (b) of this section, no license issued under this part will be valid after March 10, 2026.

■ 24. Amend § 415.35 by revising paragraph (d) to read as follows:

§ 415.35 Acceptable flight risk.

* * * * *

(d) Operation. A launch vehicle must be operated in a manner that ensures that flight risks meet the criteria of paragraph (a) of this section and in accordance with collision avoidance requirements in § 450.169 and critical asset protection requirements in § 450.101(a)(4) and (b)(4). An applicant must identify all launch operations and procedures that must be performed to ensure acceptable flight risk.

Appendix A to Part 415—[Removed and Reserved]

■ 25. Remove and reserve appendix A to part 415.

PART 417—LAUNCH SAFETY

■ 26. The authority citation for part 417 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

PART 417—[REMOVED AND RESERVED]

■ 27. Effective March 10, 2026, remove and reserve part 417.

■ 28. Revise § 417.1 to read as follows:

§ 417.1 General information.

(a) *Scope.* This part sets forth—

(1) The responsibilities of a launch operator conducting a licensed launch of an expendable launch vehicle pursuant to a license issued under part 415 of this chapter; and

(2) The requirements for maintaining a launch license obtained under part 415 of this chapter. Parts 413 and 415 of this chapter contain requirements for preparing a license application to conduct a launch, including information reviewed by the FAA to conduct a policy, safety, payload, and environmental review, and a payload determination

(b) *Applicability.* (1) The administrative requirements for filing material with the FAA in subpart A of this part apply to all licensed launches from a Federal launch range or a non-Federal launch site, except where noted.

(2) The safety requirements of subparts B through E of this part apply to all licensed launches of expendable launch vehicles. See paragraph (d) of this section for exceptions to this provision.

(c) ''*Meets intent*'' *certification.* For a licensed launch from a Federal launch range, a launch operator need not demonstrate to the FAA that an alternative means of satisfying a requirement of this part provides an equivalent level of safety for a launch if written evidence demonstrates that a Federal launch range has, by the effective date of this part, granted a ''meets intent certification,'' including through ''tailoring,'' that applies to the requirement and that launch. See paragraph (e) of this section for exceptions to this provision. Written evidence includes:

(1) Range flight plan approval,

(2) Missile system pre-launch safety package,

(3) Preliminary and final flight data packages,

(4) A tailored version of EWR 127–1,

(5) Range email to the FAA stating that the MIC was approved, or

(6) Operation approval.

(d) *Waiver.* For a licensed launch from a Federal launch range, a requirement of this part does not apply to a launch if written evidence demonstrates that a Federal launch range has, by the effective date of this part, granted a waiver that allows noncompliance with the requirement for that launch. See paragraph (e) of this section for exceptions to this provision. Written evidence includes:

(1) Range flight plan approval,

(2) Missile system pre-launch safety package,

(3) Preliminary and final flight data packages,

(4) A tailored version of EWR 127–1,

(5) Range email to the FAA stating that the waiver was approved, or

(6) Operation approval.

(e) *Exceptions to Federal launch range meets intent certifications and waivers.* Even if a licensed launch from a Federal launch range satisfies paragraph (c) or (d) of this section for a

requirement of this part, the requirement applies and a launch operator must satisfy the requirement, obtain FAA approval of any alternative, or obtain FAA approval for any further noncompliance if—

(1) The launch operator modifies the launch vehicle's operation or safety characteristics;

(2) The launch operator uses the launch vehicle, component, system, or subsystem in a new application;

(3) The FAA or the launch operator determines that a previously unforeseen or newly discovered safety hazard exists that is a source of significant risk to public safety; or

(4) The Federal launch range previously accepted a component, system, or subsystem, but did not then identify a noncompliance to a Federal launch range requirement.

(f) *Equivalent level of safety.* The requirements of this part apply to a launch operator and the launch operator's launch unless the launch operator clearly and convincingly demonstrates that an alternative approach provides an equivalent level of safety.

§ 417.3 [Amended]

■ 29. Amend § 417.3 by removing the definitions for ''conjunction on launch'' and ''launch wait''.

■ 30. Amend § 417.11 by adding paragraph (f) to read as follows:

§ 417.11 Continuing accuracy of license application; application for modification of license.

* * * * *

(f) The Administrator may determine that a modification to a license issued under this part must comply with the requirements in part 450 of this chapter. The Administrator will base the determination on the extent and complexity of the modification, whether the applicant proposes to modify multiple parts of the application, or if the application requires significant evaluation.

■ 31. Amend § 417.107 by adding paragraph (b)(5), and removing and reserving paragraph (e).

The addition reads as follows:

§ 417.107 Flight safety.

* * * * *

(b) * * *

(5) A launch operator may initiate flight of a launch vehicle only if all of the risks to the public satisfy the criteria in the critical asset protection requirements in § 450.101(a)(4) and (b)(4).

* * * * *

■ 32. Amend § 417.113 by revising paragraphs (c)(1) introductory text and (c)(1)(iii) to read as follows:

§ 417.113 Launch safety rules.

* * * * *

(c) * * *

(1) The flight-commit criteria must implement the flight safety analysis of subpart C of this part and collision avoidance requirements in § 450.169 and critical asset protection requirements in § 450.101(a)(4) and (b)(4). These must include criteria for:

* * * * *

(iii) Implementation of any launch wait in the launch window for the purpose of collision avoidance in accordance with collision avoidance requirements in § 450.169.

* * * * *

§ 417.121 [Amended]

■ 32. Amend § 417.121 by removing and reserving paragraph (c).

§ 417.231 [Removed and Reserved.]

■ 33. Remove and reserve § 417.231.

Appendix A to Part 417—[Amended]

■ 34. Amend appendix A to part 417 by removing and reserving section A417.31.

■ 35. Amend appendix C to part 417 by revising paragraph (a) in section C417.1 and removing section C417.11.

The revision reads as follows:

Appendix C to Part 417—Flight Safety Analysis Methodologies and Products for an Unguided Suborbital Launch Vehicle Flown With a Wind Weighting Safety System

* * * * *

C417.1 General

(a) This appendix contains methodologies for performing the flight safety analysis required for the launch of an unguided suborbital launch vehicle flown with a wind weighting safety system, except for the hazard area analysis required by § 417.107, which is covered in appendix B of this part. This appendix includes methodologies for a trajectory analysis, wind weighting analysis, debris analysis, and debris risk analysis.

* * * * *

PART 420—LICENSE TO OPERATE A LAUNCH SITE

■ 36. The authority citation for part 420 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

§ 420.5 [Amended]

■ 37. Amend § 420.5 by removing the definitions of ''Instantaneous impact point'', ''Launch site accident'', and ''Public''.

■ 38. Amend § 420.15 by revising paragraph (b) to read as follows:

§ 420.15 Information requirements.

* * * * *

(b) *Environmental.* The FAA is responsible for complying with the procedures and policies of the National Environmental Policy Act (NEPA) and other applicable environmental laws, regulations, and Executive Orders prior to issuing a launch site license. An applicant must provide the FAA with information needed to comply with such requirements. The FAA will consider and document the potential environmental effects associated with issuing a launch site license.

(1) *Environmental impact statement or environmental assessment.* When directed by the FAA, an applicant must—

(i) Prepare an Environmental Assessment with FAA oversight;

(ii) Assume financial responsibility for preparation of an Environmental Impact Statement by an FAA-selected and -managed consultant contractor; or

(iii) Submit information to support a written re-evaluation of a previously submitted Environmental Assessment or Environmental Impact Statement when requested by the FAA.

(2) *Categorical exclusion.* The FAA may determine that a categorical exclusion is appropriate upon receipt of supporting information from an applicant.

(3) *Environmental information.* An application must include an approved FAA Environmental Assessment, Environmental Impact Statement, categorical exclusion determination, or written re-evaluation covering all planned licensed activities in compliance with NEPA and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA.

* * * * *

■ 39. Revise § 420.51 to read as follows:

§ 420.51 Responsibilities—general.

A licensee must operate its launch site in accordance with the representations in its application.

■ 40. Amend § 420.57 by revising paragraph (d) to read as follows:

§ 420.57 Notifications.

* * * * *

(d) At least 2 days prior to flight of a launch vehicle, unless the Administrator agrees to a different time frame in accordance with § 404.15, the licensee must notify local officials and all owners of land adjacent to the launch site of the flight schedule.

■ 41. Revise § 420.59 to read as follows:

§ 420.59 Mishap plan.

(a) *General.* A licensee must report, respond to, and investigate any event that meets either paragraph (1) or (5) of the definition of ''mishap'' in § 401.7 of this chapter. A licensee must submit a mishap plan that meets the requirements of § 450.173(b) through (f).

(b) *Launch mishaps.* A launch site operator's mishap plan must also contain procedures for participating in an investigation of a launch mishap for launches launched from the launch site.

(c) *Other agency procedures.* Emergency response and investigation procedures developed in accordance with 29 CFR 1910.119 and 40 CFR part 68 will satisfy the requirements of § 450.173(d) and (e) to the extent that they include the elements required by § 450.173(d) and (e).

■ 42. Amend § 420.61 by revising paragraph (b) to read as follows:

§ 420.61 Records.

* * * * *

(b) For any event that meets any of paragraph (1), (5), or (8) of the definition of ''mishap'' in § 401.7 of this chapter, a licensee must preserve all records related to the event. Records must be retained until completion of any Federal investigation and the FAA advises the licensee that the records need not be retained.

* * * * *

PART 431—LAUNCH AND REENTRY OF A REUSABLE LAUNCH VEHICLE (RLV)

■ 43. The authority citation for part 431 continue to read as follows:

Authority: 51 U.S.C. 50901–50923.

PART 431—[REMOVED AND RESERVED]

■ 44. Effective March 10, 2026, remove and reserve part 431.

■ 45. Revise § 431.1 to read as follows:

§ 431.1 General.

(a) *Applicability.* This part applies to the following—

(1) Licenses issued under this part before June 8, 2021; and

(2) Licenses issued on or after June 8, 2021, if the FAA accepted the application under § 413.11 of this chapter before that date.

(b) *Scope.* This part prescribes requirements for obtaining a reusable launch vehicle (RLV) mission license and post-licensing requirements with which a licensee must comply to remain licensed. Requirements for preparing a license application are contained in part 413 of this subchapter.

(c) *Equivalent level of safety.* Each requirement of this part applies unless the applicant or licensee clearly and convincingly demonstrates that an alternative approach provides an equivalent level of safety to the requirement of this part.

■ 46. Add § 431.2 to read as follows:

§ 431.2 Licenses issued under this part.

(a) *Definitions.* For the purposes of this subpart, the definitions of § 401.5 of this chapter apply.

(b) *Compliance with part 450 of this chapter.* Operations under this part must comply with launch and reentry collision avoidance requirements in § 450.169 of this chapter and critical asset protection requirements in § 450.101(a)(4) and (b)(4) of this chapter.

■ 47. Amend § 431.3 by adding paragraph (c) to read as follows:

§ 431.3 Types of reusable launch vehicle mission licenses.

* * * * *

(c) *Duration of license.* Notwithstanding the duration for a license established in paragraphs (a) and (b) of this section, no license issued under this part will be valid after March 10, 2026.

■ 48. Amend § 431.43 by revising paragraph (a)(1) and removing and reserving paragraph (c)(1).

The revision reads as follows:

§ 431.43 Reusable launch vehicle mission operational requirements and restrictions.

(a) * * *

(1) That ensure RLV mission risks do not exceed the criteria set forth in §§ 431.35, 450.169, and in § 450.101(a)(4) and (b)(4) for nominal and non-nominal operations;

* * * * *

■ 49. Amend § 431.73 by adding paragraph (f) to read as follows:

§ 431.73 Continuing accuracy of license application; application for modification of license.

* * * * *

(f) The Administrator may determine that a modification to a license issued under this part must comply with the requirements in part 450 of this chapter. The Administrator will base the determination on the extent and complexity of the modification, whether the applicant proposes to modify multiple parts of the application, or if the application requires significant evaluation.

PART 433—LICENSE TO OPERATE A REENTRY SITE

■ 50. The authority citation for part 433 will continue to read as follows:

Authority: 51 U.S.C. 50901–50923.

■ 51. Revise § 433.7 to read as follows:

§ 433.7 Environmental.

(a) *General.* The FAA is responsible for complying with the procedures and policies of the National Environmental Policy Act (NEPA) and other applicable environmental laws, regulations, and Executive Orders prior to issuing a reentry site license. An applicant must provide the FAA with information needed to comply with such requirements. The FAA will consider and document the potential environmental effects associated with issuing a license for a reentry site.

(b) *Environmental impact statement or environmental assessment.* When directed by the FAA, an applicant must—

(1) Prepare an Environmental Assessment with FAA oversight;

(2) Assume financial responsibility for preparation of an Environmental Impact Statement by an FAA-selected and -managed consultant contractor; or

(3) Submit information to support a written re-evaluation of a previously submitted Environmental Assessment or Environmental Impact Statement.

(c) *Categorical exclusion.* The FAA may determine that a categorical exclusion is appropriate upon receipt of supporting information from an applicant.

(d) *Environmental information.* An application must include an approved FAA Environmental Assessment, Environmental Impact Statement, categorical exclusion determination, or written re-evaluation covering all planned licensed activities in compliance with NEPA and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA.

§ 433.9 [Removed]

■ 52. Remove § 433.9.

PART 435—REENTRY OF A REENTRY VEHICLE OTHER THAN A REUSABLE LAUNCH VEHICLE (RLV)

■ 53. The authority citation for part 435 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

PART 435—[REMOVED AND RESERVED]

■ 54. Effective March 10, 2026, remove and reserve part 435.

■ 55. Revise § 435.1 to read as follows:

§ 435.1 General.

(a) *Applicability.* This part applies to the following—

(1) Licenses issued under this part before June 8, 2021; and

(2) Licenses issued on or after June 8, 2021, if the FAA accepted the application under § 413.11 of this chapter before that date.

(b) *Scope.* This part prescribes requirements for obtaining a license to reenter a reentry vehicle other than a reusable launch vehicle (RLV), and post-licensing requirements with which a licensee must comply to remain licensed. Requirements for preparing a license application are contained in part 413 of this subchapter.

(c) *Equivalent level of safety.* Each requirement of this part applies unless the applicant or licensee clearly and convincingly demonstrates that an alternative approach provides an equivalent level of safety to the requirement of this part.

■ 56. Add § 435.2 to read as follows:

§ 435.2 Licenses.

(a) *Definitions.* For the purposes of this subpart, the definitions of § 401.5 of this chapter apply.

(b) *Compliance with part 450 of this chapter.* Operations under this part must comply with launch and reentry collision avoidance requirements in § 450.169 and critical asset protection requirements in § 450.101(a)(4) and (b)(4).

■ 57. Amend § 435.3 by adding paragraph (c) to read as follows:

§ 435.3 Types of reentry licenses.

* * * * *

(c) *Duration of license.* Notwithstanding the duration for a license established in paragraphs (a) and (b) of this section, no license issued under this part will be valid after March 10, 2026.

PART 437—EXPERIMENTAL PERMITS

■ 58. The authority citation for part 437 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

§ 437.3 [Amended]

■ 59. Amend § 437.3 by removing the definitions for ''anomaly'' and ''key flight-safety event''.

■ 60. Amend § 437.21 by revising paragraphs (b) and (c) to read as follows:

§ 437.21 General.

* * * * *

(b) *Other regulations*—(1) *Environmental*—(i) *General.* The FAA is responsible for complying with the procedures and policies of the National Environmental Policy Act (NEPA) and other applicable environmental laws, regulations, and Executive Orders to consider and document the potential environmental effects associated with proposed reusable suborbital rocket launches or reentries. An applicant must provide the FAA with information needed to comply with such requirements. The FAA will consider and document the potential environmental effects associated with proposed reusable suborbital rocket launches or reentries.

(ii) *Environmental Impact Statement or Environmental Assessment.* When directed by the FAA, an applicant must—

(A) Prepare an Environmental Assessment with FAA oversight;

(B) Assume financial responsibility for preparation of an Environmental Impact Statement by an FAA-selected and -managed consultant contractor; or

(C) Submit information to support a written re-evaluation of a previously submitted Environmental Assessment or Environmental Impact Statement.

(iii) *Categorical exclusion.* The FAA may determine that a categorical exclusion determination is appropriate upon receipt of supporting information from an applicant.

(iv) *Information requirements.* An application must include an approved FAA Environmental Assessment, Environmental Impact Statement, categorical exclusion determination, or written re-evaluation covering all planned licensed activities in compliance with NEPA and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA.

(2) *Financial responsibility.* An applicant must provide the information required by part 3 of appendix A of part 440 for the FAA to conduct a maximum probable loss analysis.

(3) *Human space flight.* An applicant proposing launch or reentry with flight crew or a space flight participant on board a reusable suborbital rocket must demonstrate compliance with §§ 460.5, 460.7, 460.11, 460.13, 460.15, 460.17, 460.51, and 460.53 of this subchapter.

(c) *Use of a safety element approval.* If an applicant proposes to use any reusable suborbital rocket, safety system, process, service, or personnel for which the FAA has issued a safety element approval under part 414 of this chapter, the FAA will not reevaluate that safety element to the extent its use is within its approved scope. As part of the application process, the FAA will evaluate the integration of that safety element into vehicle systems or operations.

* * * * *

■ 61. Revise § 437.41 to read as follows:

§ 437.41 Mishap plan.

An applicant must submit a mishap plan that meets the requirements of § 450.173 of this chapter.

■ 62. Revise § 437.65 to read as follows:

§ 437.65 Collision avoidance analysis.

For a permitted flight with a planned maximum altitude greater than 150 kilometers, a permittee must obtain a collision avoidance analysis in accordance with § 450.169 of this chapter.

§ 437.75 [Removed and Reserved]

■ 63. Remove and reserve § 437.75.

■ 64. Amend § 437.87 by revising paragraph (b) to read as follows:

§ 437.87 Records.

* * * * *

(b) For any event that meets any of paragraphs (1) through (3), (5), or (8) of the definition of ''mishap'' in § 401.7 of this chapter, a permittee must preserve all records related to the event. Records shall be retained until any Federal investigation is complete and the FAA advises the permittee that the records need not be retained.

* * * * *

■ 65. Amend § 437.89 by revising paragraphs (a) introductory text and (b) to read as follows:

§ 437.89 Pre-flight reporting.

(a) Not later than 30 days before each flight or series of flights conducted under an experimental permit, unless the Administrator agrees to a different time frame in accordance with § 404.15, a permittee must provide the FAA with the following information:

* * * * *

(b) Not later than 15 days before each permitted flight planned to reach greater than 150 km altitude, unless the Administrator agrees to a different time frame in accordance with § 404.15, a permittee must provide the FAA its planned trajectory for a collision avoidance analysis.

PART 440—FINANCIAL RESPONSIBILITY

■ 66. The authority citation for part 440 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

■ 67. Amend § 440.3 by revising the introductory text and the definition for ''maximum probable loss (MPL)'' to read as follows:

§ 440.3 Definitions.

Except as otherwise provided in this section, any term used in this part and defined in 51 U.S.C. 50901–50923, or in

§ 401.5 or § 401.7 of this chapter shall have the meaning contained therein.

* * * * *

Maximum probable loss (MPL) means the greatest dollar amount of loss for bodily injury or property damage that is reasonably expected to result from a licensed or permitted activity;

(1) Losses to third parties, excluding Government personnel and other launch or reentry participants' employees involved in licensed or permitted activities and neighboring operations personnel, that are reasonably expected to result from a licensed or permitted activity are those that have a probability of occurrence of no less than one in ten million.

(2) Losses to Government property and Government personnel involved in licensed or permitted activities and neighboring operations personnel that are reasonably expected to result from licensed or permitted activities are those that have a probability of occurrence of no less than one in one hundred thousand.

* * * * *

§ 440.3 [Amended]

■ 68. Effective March 10, 2026, further amend § 440.3 in the introductory text by removing '' in §§ 401.5 or 401.7'' and add, in its place, ''in § 401.7''.

■ 69. Amend § 440.15 by revising paragraphs (a)(1) through (4) to read as follows:

§ 440.15 Demonstration of compliance.

(a) * * *

(1) All reciprocal waiver of claims agreements required under § 440.17(c) must be submitted at least 30 days before the start of any licensed or permitted activity involving a customer, crew member, or space flight participant; unless the Administrator agrees to a different time frame in accordance with § 404.15;

(2) Evidence of insurance must be submitted at least 30 days before commencement of any licensed launch or permitted activity, and for licensed reentry no less than 30 days before commencement of launch activities involving the reentry licensee, unless the Administrator agrees to a different time frame in accordance with § 404.15;

(3) Evidence of financial responsibility in a form other than insurance, as provided under § 440.9(f) must be submitted at least 60 days before commencement of a licensed or permitted activity, unless the Administrator agrees to a different time frame in accordance with § 404.15; and

(4) Evidence of renewal of insurance or other form of financial responsibility must be submitted at least 30 days in advance of its expiration date, unless the Administrator agrees to a different time frame in accordance with § 404.15.

* * * * *

■ 70. Add part 450 to read as follows:

PART 450—LAUNCH AND REENTRY LICENSE REQUIREMENTS

Sec.

Subpart A—General Information

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450.3 Scope of a vehicle operator license.
450.5 Issuance of a vehicle operator license.
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450.201 Responsibility for public safety and safety of property.
450.203 Compliance.
450.205 Financial responsibility requirements.
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450.213 Pre-flight reporting.
450.215 Post-flight reporting.
450.217 Registration of space objects.
450.219 Records.
Appendix A to Part 450—Collision Analysis Worksheet

Authority: 51 U.S.C. 50901–50923.

Subpart A—General Information

§ 450.1 Applicability.

This part prescribes requirements for obtaining and maintaining a license to launch, reenter, or both launch and reenter, a launch or reentry vehicle.

§ 450.3 Scope of a vehicle operator license.

(a) *General.* A vehicle operator license authorizes a licensee to conduct one or more launches or reentries using the same vehicle or family of vehicles. A vehicle operator license identifies the scope of authorization as defined in paragraphs (b) and (c) of this section or as agreed to by the Administrator.

(b) *Scope of launch.* A vehicle operator license authorizes launch, which includes the flight of a launch

vehicle and pre- and post-flight ground operations as follows:

(1) Launch begins when hazardous pre-flight operations commence at a U.S. launch site that may pose a threat to the public. Hazardous pre-flight operations that may pose a threat to the public include pressurizing or loading of propellants into the vehicle, operations involving a fueled launch vehicle, the transfer of energy necessary to initiate flight, or any hazardous activity preparing the vehicle for flight. Hazardous pre-flight operations do not include the period between the end of the previous launch and launch vehicle reuse, when the vehicle is in a safe and dormant state.

(2) At a non-U.S. launch site, launch begins at ignition or at the first movement that initiates flight, whichever occurs earlier.

(3) Launch ends when any of the following events occur:

(i) For an orbital launch of a vehicle without a reentry of the vehicle, launch ends after the licensee's last exercise of control over its vehicle on orbit, after vehicle component impact or landing on Earth, after activities necessary to return the vehicle or component to a safe condition on the ground after impact or landing, or after activities necessary to return the site to a safe condition, whichever occurs latest;

(ii) For an orbital launch of a vehicle with a reentry of the vehicle, launch ends after deployment of all payloads, upon completion of the vehicle's first steady-state orbit if there is no payload deployment, after vehicle component impact or landing on Earth, after activities necessary to return the vehicle or component to a safe condition on the ground after impact or landing, or after activities necessary to return the site to a safe condition, whichever occurs latest;

(iii) For a suborbital launch that includes a reentry, launch ends after reaching apogee;

(iv) For a suborbital launch that does not include a reentry, launch ends after vehicle or vehicle component impact or landing on Earth, after activities necessary to return the vehicle or vehicle component to a safe condition on the ground after impact or landing, or after activities necessary to return the site to a safe condition, whichever occurs latest.

(c) *Scope of reentry.* A vehicle operator license authorizes reentry. Reentry includes activities conducted in Earth orbit or outer space to determine reentry readiness and that are critical to ensuring public health and safety and the safety of property during reentry flight. Reentry also includes activities necessary to return the reentry vehicle, or vehicle component, to a safe condition on the ground after impact or landing.

(d) *Application requirements.* An applicant must identify pre- and post-flight ground operations at a U.S. launch site sufficient for the Administrator to determine the scope of activities authorized under the license.

§ 450.5 Issuance of a vehicle operator license.

(a) The FAA issues a vehicle operator license to an applicant who has obtained all approvals and determinations required under this part for a license.

(b) A vehicle operator license authorizes a licensee to conduct launches or reentries, in accordance with the representations contained in the licensee's application, with subparts C and D of this part, and subject to the licensee's compliance with terms and conditions contained in license orders accompanying the license, including financial responsibility requirements.

§ 450.7 Duration of a vehicle operator license.

A vehicle operator license is valid for the period of time determined by the Administrator as necessary to conduct the licensed activity but may not exceed 5 years from the issuance date.

§ 450.9 Additional license terms and conditions.

The FAA may modify a vehicle operator license at any time by modifying or adding license terms and conditions to ensure compliance with the Act and regulations.

§ 450.11 Transfer of a vehicle operator license.

(a) Only the FAA may transfer a vehicle operator license.

(b) Either the holder of a vehicle operator license or the prospective transferee may request a vehicle operator license transfer.

(c) Both the holder and prospective transferee must agree to the transfer.

(d) An applicant for transfer of a vehicle operator license must submit a license application in accordance with part 413 of this chapter and must meet the requirements of part 450 of this chapter.

(e) The FAA will transfer a license to an applicant that has obtained all of the approvals and determinations required under this part for a license. In conducting its reviews and issuing approvals and determinations, the FAA may incorporate by reference any findings made part of the record to support the initial licensing determination. The FAA may modify a license to reflect any changes necessary as a result of a license transfer.

(f) The FAA will provide written notice of its determination to the person requesting the vehicle operator license transfer.

§ 450.13 Rights not conferred by a vehicle operator license.

Issuance of a vehicle operator license does not relieve a licensee of its obligation to comply with all applicable requirements of law or regulation that may apply to its activities, nor does issuance confer any proprietary, property, or exclusive right in the use of any Federal launch or reentry site or related facilities, airspace, or outer space.

Subpart B—Requirements to Obtain a Vehicle Operator License

§ 450.31 General.

(a) To obtain a vehicle operator license, an applicant must—

(1) Submit a license application in accordance with the procedures in part 413 of this chapter;

(2) Obtain a policy approval from the Administrator in accordance with § 450.41;

(3) Obtain a favorable payload determination from the Administrator in accordance with § 450.43, if applicable;

(4) Obtain a safety approval from the Administrator in accordance with § 450.45;

(5) Satisfy the environmental review requirements of § 450.47; and

(6) Provide the information required by appendix A of part 440 for the Administrator to conduct a maximum probable loss analysis for the applicable licensed operation.

(b) An applicant may apply for the approvals and determinations in paragraphs (a)(2) through (6) of this section separately or all together in one complete application, using the application procedures contained in part 413 of this chapter.

(c) An applicant may also apply for a safety approval in an incremental manner, in accordance with § 450.33.

(d) An applicant may reference materials previously provided as part of a license application in order to meet the application requirements of this part.

§ 450.33 Incremental review and determinations.

An applicant may submit its application for a safety review in modules using an incremental approach approved by the Administrator.

(a) An applicant must identify to the Administrator, prior to submitting an

application, whether it will submit a modular application for any approval or determination.

(b) An applicant using an incremental approach must have the approach approved by the Administrator prior to submitting an application. In reviewing a proposed approach, the Administrator will consider the following:

(1) Whether the modules can be reviewed independently; and

(2) Whether the modules will be submitted in a workable chronological order.

(c) The Administrator may make incremental determinations as part of this review process.

§ 450.35 Means of compliance.

(a) Prior to application acceptance, a means of compliance must be accepted by the Administrator for the following:

(1) Section 450.115(b)(1) regarding flight safety analyses;

(2) Section 450.139(e)(1) regarding toxic hazards for flight;

(3) Section 450.145(b) regarding highly-reliable flight safety system;

(4) Section 450.163(a)(1) regarding lightning hazard mitigation; and

(5) Section 450.187(e)(1) regarding toxic hazards mitigation for ground operations.

(b) A person requesting acceptance of a proposed means of compliance outside a license application must submit the proposed means of compliance to the FAA in a form and manner acceptable to the Administrator.

§ 450.37 Equivalent level of safety.

(a) An applicant must demonstrate compliance with each requirement of this part, unless the applicant clearly and convincingly demonstrates that an alternative approach provides an equivalent level of safety to the requirement of this part.

(b) Paragraph (a) of this section does not apply to § 450.101(a), (b), (c)(1) and (3), (d), (e)(1), and (g).

§ 450.39 Use of safety element approval.

If an applicant proposes to use any vehicle, safety system, process, service, or personnel for which the FAA has issued a safety element approval under part 414 of this chapter, the FAA will not reevaluate that safety element during a license application evaluation to the extent its use is within its approved scope.

§ 450.41 Policy review and approval.

(a) *General.* The FAA issues a policy approval to an applicant unless the FAA determines that a proposed launch or reentry would jeopardize U.S. national security or foreign policy interests, or international obligations of the United States.

(b) *Interagency consultation.* (1) The FAA consults with the Department of Defense to determine whether a license application presents any issues affecting U.S. national security.

(2) The FAA consults with the Department of State to determine whether a license application presents any issues affecting U.S. foreign policy interests or international obligations.

(3) The FAA consults with other Federal agencies, including the National Aeronautics and Space Administration, authorized to address issues identified under paragraph (a) of this section, associated with an applicant's proposal.

(c) *Issues during policy review.* The FAA will advise an applicant, in writing, of any issue raised during a policy review that would impede issuance of a policy approval. The applicant may respond, in writing, or amend its license application as required by § 413.17 of this chapter.

(d) *Denial of policy approval.* The FAA notifies an applicant, in writing, if it has denied policy approval for a license application. The notice states the reasons for the FAA's determination. The applicant may seek further review of the determination in accordance with § 413.21 of this chapter.

(e) *Application requirements for policy review.* In its license application, an applicant must—

(1) Identify the model, type, and configuration of any vehicle proposed for launch or reentry by the applicant;

(2) Describe the vehicle by characteristics that include individual stages, their dimensions, type and amounts of all propellants, and maximum thrust;

(3) Identify foreign ownership of the applicant as follows:

(i) For a sole proprietorship or partnership, identify all foreign ownership;

(ii) For a corporation, identify any foreign ownership interests of 10 percent or more; and

(iii) For a joint venture, association, or other entity, identify any participating foreign entities; and

(4) Identify the proposed vehicle flight profile, including:

(i) Launch or reentry site, including any contingency abort locations;

(ii) Flight azimuths, trajectories, and associated ground tracks and instantaneous impact points for the duration of the licensed activity, including any contingency abort profiles;

(iii) Sequence of planned events or maneuvers during flight;

(iv) Normal impact or landing areas for all mission hardware; and

(v) For each orbital mission, the range of intermediate and final orbits of each vehicle upper stage and their estimated orbital lifetimes.

§ 450.43 Payload review and determination.

(a) *General.* If applicable, the FAA issues a favorable payload determination for a launch or reentry to a license applicant or payload owner or operator if—

(1) The applicant, payload owner, or payload operator has obtained all required licenses, authorizations, and permits; and

(2) Its launch or reentry would not jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States.

(b) *Relationship to other executive agencies.* The FAA does not make a determination under paragraph (a)(2) of this section for—

(1) Those aspects of payloads that are subject to regulation by the Federal Communications Commission or the Department of Commerce; or

(2) Payloads owned or operated by the U.S. Government.

(c) *Classes of payloads.* The FAA may review and issue findings regarding a proposed class of payload, including communications, remote sensing, or navigation. However, prior to a launch or reentry, each payload is subject to verification by the FAA that its launch or reentry would not jeopardize public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States.

(d) *Payload owner or payload operator may apply.* In addition to a launch or reentry operator, a payload owner or payload operator may request a payload review and determination.

(e) *Interagency consultation.* The FAA consults with other agencies as follows:

(1) The Department of Defense to determine whether launch or reentry of a proposed payload or payload class would present any issues affecting U.S. national security;

(2) The Department of State to determine whether launch or reentry of a proposed payload or payload class would present any issues affecting U.S. foreign policy interests or international obligations; or

(3) Other Federal agencies, including the National Aeronautics and Space Administration, authorized to address issues of public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States,

associated with the launch or reentry of a proposed payload or payload class.

(f) *Issues during payload review.* The FAA will advise a person requesting a payload determination, in writing, of any issue raised during a payload review that would impede issuance of a license to launch or reenter that payload or payload class. The person requesting payload review may respond, in writing, or amend its application as required by § 413.17 of this chapter.

(g) *Denial of a payload determination.* The FAA notifies an applicant, in writing, if it has denied a favorable payload determination. The notice states the reasons for the FAA's determination. The applicant may seek further review of the determination in accordance with § 413.21 of this chapter.

(h) *Incorporation of payload determination in license application.* A favorable payload determination issued for a payload or class of payload may be included by a license applicant as part of its application. However, any change in information provided under paragraph (i) of this section must be reported in accordance with § 413.17 of this chapter. The FAA determines whether a favorable payload determination remains valid in light of reported changes and may conduct an additional payload review.

(i) *Application requirements.* A person requesting review of a particular payload or payload class must identify the following:

(1) For launch of a payload:

(i) Payload name or class of payload, and function;

(ii) Description, including physical dimensions, weight, composition, and any hosted payloads;

(iii) Payload owner and payload operator, if different from the person requesting payload review and determination;

(iv) Any foreign ownership of the payload or payload operator, as specified in § 450.41(e)(3);

(v) Hazardous materials as defined in § 401.7 of this chapter, radioactive materials, and the amounts of each;

(vi) Explosive potential of payload materials, alone and in combination with other materials found on the payload;

(vii) For orbital launches, parameters for parking, transfer and final orbits, and approximate transit times to final orbit;

(viii) Delivery point in flight at which the payload will no longer be under the licensee's control;

(ix) Intended operations during the lifetime of the payload, including anticipated life span and any planned disposal;

(x) Any encryption associated with data storage on the payload and transmissions to or from the payload; and

(xi) Any other information necessary to make a determination based on public health and safety, safety of property, U.S. national security or foreign policy interests, or international obligations of the United States.

(2) For reentry of a payload:

(i) Payload name or class of payload, and function;

(ii) Physical characteristics, dimensions, and weight of the payload;

(iii) Payload owner and payload operator, if different from the person requesting the payload review and determination;

(iv) Type, amount, and container of hazardous materials and radioactive materials in the payload;

(v) Explosive potential of payload materials, alone and in combination with other materials found on the payload or reentry vehicle during reentry; and

(vi) Designated reentry site.

§ 450.45 Safety review and approval.

(a) *General.* The FAA issues a safety approval to an applicant if it determines that an applicant can conduct launch or reentry without jeopardizing public health and safety and safety of property. A license applicant must satisfy the application requirements in this section and subpart C of this part.

(b) *Services or property provided by a Federal launch or reentry site.* The FAA will accept any safety-related launch or reentry service or property provided by a Federal launch or reentry site or other Federal entity by contract, as long as the FAA determines that the launch or reentry services or property provided satisfy this part.

(c) *Issues during safety review.* The FAA will advise an applicant, in writing, of any issues raised during a safety review that would impede issuance of a safety approval. The applicant may respond, in writing, or amend its license application as required by § 413.17 of this chapter.

(d) *Denial of a safety approval.* The FAA notifies an applicant, in writing, if it has denied a safety approval for a license application. The notice states the reasons for the FAA's determination. The applicant may seek further review of the determination in accordance with § 413.21 of this chapter.

(e) *Application requirements.* An applicant must submit the information required in the ''Application requirements'' paragraphs in individual sections in subpart C of this part, as well as the following:

(1) *General.* An application must—

(i) Contain a glossary of unique terms and acronyms used in alphabetical order;

(ii) Contain a listing of all referenced material;

(iii) Use equations and mathematical relationships derived from or referenced to a recognized standard or text, and define all algebraic parameters;

(iv) Include the units of all numerical values provided; and

(v) Include a legend or key that identifies all symbols used for any schematic diagrams.

(2) *Site description.* An applicant must identify the proposed launch or reentry site, including contingency abort locations, and submit the following:

(i) Boundaries of the site;

(ii) Launch or landing point locations, including latitude and longitude;

(iii) Identity of any site operator; and

(iv) Identity of any facilities at the site that will be used for pre- or post-flight ground operations.

(3) *Vehicle description.* An applicant must submit the following:

(i) A written description of the vehicle or family of vehicles, including structural, thermal, pneumatic, propulsion, electrical, and avionics and guidance systems used in each vehicle, and all propellants. The description must include a table specifying the type and quantities of all hazardous materials on each vehicle and must include propellants, explosives, and toxic materials; and

(ii) A drawing of each vehicle that identifies:

(A) Each stage, including strap-on motors;

(B) Physical dimensions and weight;

(C) Location of all safety-critical systems;

(D) Location of all major vehicle control systems, propulsion systems, pressure vessels, and any other hardware that contains potential hazardous energy or hazardous material; and

(E) For an unguided suborbital launch vehicle, the location of the rocket's center of pressure in relation to its center of gravity for the entire flight profile.

(4) *Mission schedule.* An applicant must submit a generic launch or reentry processing schedule that identifies any readiness activities, such as reviews and rehearsals, and each safety-critical pre-flight operation to be conducted. The mission schedule must also identify day of flight activities.

(5) *Human space flight.* For a proposed launch or reentry with a human being on board a vehicle, an applicant must demonstrate compliance

with §§ 460.5, 460.7, 460.11, 460.13, 460.15, 460.17, 460.51, and 460.53 of this chapter.

(6) *Radionuclides.* The FAA will evaluate the launch or reentry of any radionuclide on a case-by-case basis, and issue an approval if the FAA finds that the launch or reentry is consistent with public health and safety, safety of property, and national security and foreign policy interests of the United States. For any radionuclide on a launch or reentry vehicle, an applicant must—

(i) Identify the type and quantity;

(ii) Include a reference list of all documentation addressing the safety of its intended use; and

(iii) Describe all approvals by the Nuclear Regulatory Commission for pre-flight ground operations.

(7) *Additional material.* The FAA may also request—

(i) Any information incorporated by reference in the license application; and

(ii) Additional products that allow the FAA to conduct an independent safety analysis.

§ 450.47 Environmental review.

(a) *General.* The FAA is responsible for complying with the procedures and policies of the National Environmental Policy Act (NEPA) and other applicable environmental laws, regulations, and Executive Orders prior to issuing a launch or reentry license. An applicant must provide the FAA with information needed to comply with such requirements. The FAA will consider and document the potential environmental effects associated with issuing a launch or reentry license consistent with paragraph (b) of this section.

(b) *Environmental Impact Statement or Environmental Assessment.* When directed by the FAA, an applicant must—

(1) Prepare an Environmental Assessment with FAA oversight;

(2) Assume financial responsibility for preparation of an Environmental Impact Statement by an FAA-selected and -managed consultant contractor; or

(3) Submit information to support a written re-evaluation of a previously submitted Environmental Assessment or Environmental Impact Statement.

(c) *Categorical exclusion.* The FAA may determine that a categorical exclusion is appropriate upon receipt of supporting information from an applicant.

(d) *Application requirements.* An application must include an approved FAA Environmental Assessment, Environmental Impact Statement, categorical exclusion determination, or written re-evaluation, which should address compliance with any other applicable environmental laws, regulations, and Executive Orders covering all planned licensed activities in compliance with NEPA and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA.

Subpart C—Safety Requirements

Safety Criteria

§ 450.101 Safety criteria.

(a) *Launch risk criteria.* For any launch, an operator may initiate the flight of a launch vehicle only if all risks to the public satisfy the criteria in this paragraph (a). For an orbital launch, the criteria in this paragraph apply from liftoff through orbital insertion. For a suborbital launch, or a suborbital launch and reentry, the criteria in this paragraph apply from liftoff through final impact or landing.

(1) *Collective risk.* The collective risk, measured as expected number of casualties (E_C), consists of risk posed by impacting inert and explosive debris, toxic release, and far field blast overpressure. Public risk due to any other hazard associated with the proposed flight of a launch vehicle will be determined by the Administrator on a case-by-case basis.

(i) The risk to all members of the public, excluding persons in aircraft and neighboring operations personnel, must not exceed an expected number of 1×10^{-4} casualties.

(ii) The risk to all neighboring operations personnel must not exceed an expected number of 2×10^{-4} casualties.

(2) *Individual risk.* The individual risk, measured as probability of casualty (P_C), consists of risk posed by impacting inert and explosive debris, toxic release, and far field blast overpressure. The FAA will determine whether to approve public risk due to any other hazard associated with the proposed flight of a launch vehicle on a case-by-case basis.

(i) The risk to any individual member of the public, excluding neighboring operations personnel, must not exceed a probability of casualty of 1×10^{-6} per launch.

(ii) The risk to any individual neighboring operations personnel must not exceed a probability of casualty of 1×10^{-5} per launch.

(3) *Aircraft risk.* A launch operator must establish any aircraft hazard areas necessary to ensure the probability of impact with debris capable of causing a casualty for aircraft does not exceed 1×10^{-6}.

(4) *Risk to critical assets.* (i) The risk to critical assets, measured as the probability of loss of functionality, must not exceed the following probabilities:

(A) For each critical asset, except for a critical payload, 1×10^{-3}; and

(B) For each critical payload, 1×10^{-4}.

(ii) The Administrator will consult with relevant Federal agencies, and each agency will identify, for purposes of this part, any critical assets that the agency owns or otherwise depends on. For purposes of this part, the Administrator will accept any identification by the Secretary of Defense that an asset is critical to national security.

(iii) The Administrator or Federal site operator will notify the licensee of any risk to critical assets above the risk criteria in paragraph (a)(4)(i) of this section.

(iv) The Administrator may determine, in consultation with relevant Federal agencies, that a more stringent probability is necessary to protect the national interests of the United States.

(v) The risk criteria in paragraph (a)(4)(i) of this section do not apply to property, facilities, or infrastructure supporting the launch that are within the public area distance, as defined in part 420, appendix E, tables E1 and E2 or associated formulae, of the vehicle's launch point.

(b) *Reentry risk criteria.* For any reentry, an operator may initiate the deorbit of a vehicle only if all risks to the public satisfy the criteria in this paragraph (b). The following criteria apply to each reentry, other than a suborbital reentry, from the final health check prior to initiating deorbit through final impact or landing:

(1) *Collective risk.* The collective risk, measured as expected number of casualties (E_C), consists of risk posed by impacting inert and explosive debris, toxic release, and far field blast overpressure. Public risk due to any other hazard associated with the proposed deorbit of a reentry vehicle will be determined by the Administrator on a case-by-case basis.

(i) The risk to all members of the public, excluding persons in aircraft and neighboring operations personnel, must not exceed an expected number of 1×10^{-4} casualties.

(ii) The risk to all neighboring operations personnel must not exceed an expected number of 2×10^{-4} casualties.

(2) *Individual risk.* The individual risk, measured as probability of casualty (P_C), consists of risk posed by impacting inert and explosive debris, toxic release, and far field blast overpressure. Public risk due to any other hazard associated with the proposed flight of a launch

vehicle will be determined on a case-by-case basis.

(i) The risk to any individual member of the public, excluding neighboring operations personnel, must not exceed a probability of casualty of 1×10^{-6} per reentry.

(ii) The risk to any individual neighboring operations personnel must not exceed a probability of casualty of 1×10^{-5} per reentry.

(3) *Aircraft risk.* A reentry operator must establish any aircraft hazard areas necessary to ensure the probability of impact with debris capable of causing a casualty for aircraft does not exceed 1×10^{-6}.

(4) *Risk to critical assets.* (i) The risk to critical assets, measured as the probability of loss of functionality, must not exceed the following probabilities:

(A) For each critical asset, except for a critical payload, 1×10^{-3}; and

(B) For each critical payload, 1×10^{-4}.

(ii) The Administrator will consult with relevant Federal agencies, and each agency will identify, for purposes of this part, any critical assets that the agency owns or otherwise depends on. For purposes of this part, the Administrator will accept any identification by the Secretary of Defense that an asset is critical to national security.

(iii) The Administrator or Federal site operator will notify the licensee of any risk to critical assets above the risk criteria in paragraph (b)(4)(i) of this section.

(iv) The Administrator may determine, in consultation with relevant Federal agencies, that a more stringent probability is necessary to protect the national interests of the United States.

(c) *High consequence event protection.* An operator must protect against a high consequence event in uncontrolled areas for each phase of flight by:

(1) Using flight abort as a hazard control strategy in accordance with the requirements of § 450.108;

(2) Ensuring the consequence of any reasonably foreseeable failure mode, in any significant period of flight, is no greater than 1×10^{-3} conditional expected casualties; or

(3) Establishing the launch or reentry vehicle has sufficient demonstrated reliability as agreed to by the Administrator based on conditional expected casualties criteria during that phase of flight.

(d) *Disposal safety criteria.* A launch operator must ensure that any disposal meets the criteria of paragraphs (b)(1) through (3) of this section, or targets a broad ocean area.

(e) *Protection of people and property on orbit.* (1) A launch or reentry operator must prevent the collision between a launch or reentry vehicle stage or component and people or property on orbit, in accordance with the requirements in § 450.169(a).

(2) For any launch vehicle stage or component that reaches Earth orbit, a launch operator must prevent the creation of debris through the conversion of energy sources into energy that fragments the stage or component, in accordance with the requirements in § 450.171.

(f) *Notification of planned impacts.* For any launch, reentry, or disposal, an operator must notify the public of any region of land, sea, or air that contains, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty.

(g) *Validity of the analysis.* For any analysis used to demonstrate compliance with this section, an operator must use accurate data and scientific principles and the analysis must be statistically valid. The method must produce results consistent with or more conservative than the results available from previous mishaps, tests, or other valid benchmarks, such as higher-fidelity methods.

System Safety Program

§ 450.103 System safety program.

An operator must implement and document a system safety program throughout the lifecycle of a launch or reentry system that includes the following:

(a) *Safety organization.* An operator must maintain a safety organization that has clearly defined lines of communication and approval authority for all public safety decisions. At a minimum, the safety organization must have the following positions:

(1) *Mission director.* For each launch or reentry, an operator must designate a position responsible for the safe conduct of all licensed activities and authorized to provide final approval to proceed with licensed activities. This position is referred to as the mission director in this part.

(2) *Safety official.* For each launch or reentry, an operator must designate a position with direct access to the mission director who is—

(i) Responsible for communicating potential safety and noncompliance issues to the mission director; and

(ii) Authorized to examine all aspects of the operator's ground and flight safety operations, and to independently monitor compliance with the operator's safety policies, safety procedures, and licensing requirements.

(3) *Addressing safety official concerns.* The mission director must ensure that all of the safety official's concerns are addressed.

(b) *Hazard management.* For hazard management:

(1) An operator must implement methods to assess the system to ensure the validity of the hazard control strategy determination and any flight hazard or flight safety analysis throughout the lifecycle of the launch or reentry system;

(2) An operator must implement methods for communicating and implementing any updates throughout the organization; and

(3) Additionally, an operator required to conduct a flight hazard analysis must implement a process for tracking hazards, risks, mitigation measures, and verification activities.

(c) *Configuration management and control.* An operator must—

(1) Employ a process that tracks configurations of all safety-critical systems and documentation related to the operation;

(2) Ensure the use of correct and appropriate versions of systems and documentation tracked in paragraph (c)(1) of this section; and

(3) Document the configurations and versions identified in paragraph (c)(2) of this section for each licensed activity.

(d) *Post-flight data review.* An operator must employ a process for evaluating post-flight data to—

(1) Ensure consistency between the assumptions used for the hazard control strategy determination, any flight hazard or flight safety analyses, and associated mitigation and hazard control measures;

(2) Resolve any inconsistencies identified in paragraph (d)(1) of this section prior to the next flight of the vehicle;

(3) Identify any anomaly that may impact any flight hazard analysis, flight safety analysis, or safety-critical system, or is otherwise material to public safety; and

(4) Address any anomaly identified in paragraph (d)(3) of this section prior to the next flight as necessary to ensure public safety, including updates to any flight hazard analysis, flight safety analysis, or safety-critical system.

(e) *Application requirements.* An applicant must submit in its application the following:

(1) A description of the applicant's safety organization as required by paragraph (a) of this section, identifying the applicant's lines of communication and approval authority, both internally and externally, for all public safety

decisions and the provision of public safety services; and

(2) A summary of the processes and products identified in the system safety program requirements in paragraphs (b), (c), and (d) of this section.

Hazard Control Strategies

§ 450.107 Hazard control strategies.

(a) *General.* To meet the safety criteria of § 450.101(a), (b), or (c) for the flight, or any phase of flight, of a launch or reentry vehicle, an operator must use one or more of the hazard control strategies identified in § 450.108 through § 450.111.

(b) *Hazard control strategy determination.* For each phase of flight during a launch or reentry, an operator must use a functional hazard analysis to determine a hazard control strategy or strategies that account for—

(1) All functional failures associated with reasonably foreseeable hazardous events that have the capability to create a hazard to the public;

(2) Safety-critical systems; and

(3) A timeline of all safety-critical events.

(c) *Flight hazard analysis.* An operator must conduct a flight hazard analysis in accordance with § 450.109 of this part for the flight, or phase of flight, of a launch or reentry vehicle if the public safety hazards cannot be mitigated adequately to meet the public risk criteria of § 450.101(a), (b), and (c) using physical containment, wind weighting, or flight abort.

(d) *Application requirements.* An applicant must submit in its application—

(1) The results of the hazard control strategy determination, including—

(i) All functional failures identified under paragraph (b)(1) of this section;

(ii) The identification of all safety-critical systems; and

(iii) A timeline of all safety-critical events.

(2) A description of its hazard control strategy or strategies for each phase of flight.

§ 450.108 Flight abort.

(a) *Applicability.* This section applies to the use of flight abort as a hazard control strategy for the flight, or phase of flight, of a launch or reentry vehicle to meet the safety criteria of § 450.101.

(b) *Flight safety system.* An operator must use a flight safety system that:

(1) Meets the requirements of § 450.145 if the consequence of any reasonably foreseeable failure mode in any significant period of flight is greater than 1×10^{-2} conditional expected casualties in uncontrolled areas; or

(2) Meets the requirements of § 450.143 if the consequence of any reasonably foreseeable failure mode in any significant period of flight is between 1×10^{-2} and 1×10^{-3} conditional expected casualties for uncontrolled areas.

(c) *Flight safety limits objectives.* An operator must determine and use flight safety limits that define when an operator must initiate flight abort for each of the following—

(1) To ensure compliance with the safety criteria of § 450.101(a) and (b);

(2) To prevent continued flight from increasing risk in uncontrolled areas if the vehicle is unable to achieve a useful mission;

(3) To prevent the vehicle from entering a period of materially increased public exposure in uncontrolled areas, including before orbital insertion, if a critical vehicle parameter is outside its pre-established expected range or indicates an inability to complete flight within the limits of a useful mission;

(4) To prevent conditional expected casualties greater than 1×10^{-2} in uncontrolled areas due to flight abort or due to flight outside the limits of a useful mission from any reasonably foreseeable off-trajectory failure mode in any significant period of flight; and

(5) To prevent the vehicle state from reaching identified conditions that are anticipated to compromise the capability of the flight safety system if further flight has the potential to violate a flight safety limit.

(6) In lieu of paragraphs (c)(2) and (4) of this section, to prevent debris capable of causing a casualty due to any hazard from affecting uncontrolled areas using a flight safety system that complies with § 450.145.

(d) *Flight safety limits constraints.* An operator must determine flight safety limits that—

(1) Account for temporal and geometric extents on the Earth's surface of any reasonably foreseeable vehicle hazards under all reasonably foreseeable conditions during normal and malfunctioning flight;

(2) Account for physics of hazard generation and transport including uncertainty;

(3) Account for the potential to lose valid data necessary to evaluate the flight abort rules;

(4) Account for the time delay, including uncertainties, between the violation of a flight abort rule and the time when the flight safety system is expected to activate;

(5) Account in individual, collective, and conditional risk evaluations both for proper functioning of the flight safety system and failure of the flight safety system;

(6) Are designed to avoid flight abort that results in increased collective risk to the public in uncontrolled areas, compared to continued flight; and

(7) Ensure that any trajectory within the limits of a useful mission that is permitted to fly without abort would meet the collective risk criteria of § 450.101(a)(1) or (b)(1) when analyzed as if it were the planned mission in accordance with § 450.213(b)(2).

(e) *End of flight abort.* A flight does not need to be aborted to protect against high consequence events in uncontrolled areas beginning immediately after critical vehicle parameters are validated, if the vehicle is able to achieve a useful mission and the following conditions are met for the remainder of flight:

(1) Flight abort would not materially decrease the risk from a high consequence event; and

(2) There are no key flight safety events.

(f) *Flight abort rules.* For each launch or reentry, an operator must establish and observe flight abort rules that govern the conduct of the launch or reentry as follows.

(1) Vehicle data required to evaluate flight abort rules must be available to the flight safety system under all reasonably foreseeable conditions during normal and malfunctioning flight.

(2) The flight safety system must abort flight:

(i) When valid, real-time data indicate the vehicle has violated any flight safety limit developed in accordance with this section;

(ii) When the vehicle state approaches identified conditions that are anticipated to compromise the capability of the flight safety system and further flight has the potential to violate a flight safety limit; and

(iii) In accordance with methods used to satisfy (d)(3) of this section, if tracking data is invalid and further flight has the potential to violate a flight safety limit.

(g) *Application requirements.* An applicant must submit in its application the following:

(1) A description of the methods used to demonstrate compliance with paragraph (c) of this section, including descriptions of how each analysis constraint in paragraph (d) of this section is satisfied in accordance with § 450.115.

(2) A description of how each flight safety limit and flight abort rule is evaluated and implemented during vehicle flight, including the quantitative

criteria that will be used, a description of any critical parameters, and how the values required in paragraphs (c)(3) and (e) of this section are identified;

(3) A graphic depiction or series of depictions of flight safety limits for a representative mission together with the launch or landing point, all uncontrolled area boundaries, the nominal trajectory, extents of normal flight, and limits of a useful mission trajectories, with all trajectories in the same projection as each of the flight safety limits; and

(4) A description of the vehicle data that will be available to evaluate flight abort rules under all reasonably foreseeable conditions during normal and malfunctioning flight.

§ 450.109 Flight hazard analysis.

(a) *Applicability.* This section applies to the use of a flight hazard analysis as a hazard control strategy to derive hazard controls for the flight, or phase of flight, of a launch or reentry vehicle. Hazards associated with computing systems and software are further addressed in § 450.141.

(b) *Analysis.* A flight hazard analysis must identify, describe, and analyze all reasonably foreseeable hazards to public safety resulting from the flight of a launch or reentry vehicle. Each flight hazard analysis must—

(1) Identify all reasonably foreseeable hazards, and the corresponding failure mode for each hazard, associated with the launch or reentry system relevant to public safety, including those resulting from:

(i) Vehicle operation, including staging and release;

(ii) System, subsystem, and component failures or faults;

(iii) Software operations;

(iv) Environmental conditions;

(v) Human factors;

(vi) Design inadequacies;

(vii) Procedure deficiencies;

(viii) Functional and physical interfaces between subsystems, including any vehicle payload;

(ix) Reuse of components or systems; and

(x) Interactions of any of the above.

(2) Assess each hazard's likelihood and severity.

(3) Ensure that the likelihood of any hazardous condition that may cause death or serious injury to the public is extremely remote.

(4) Identify and describe the risk elimination and mitigation measures required to satisfy paragraph (b)(3) of this section.

(5) Document that the risk elimination and mitigation measures achieve the risk level of paragraph (b)(3) of this section through validation and verification. Verification includes:

(i) Analysis;

(ii) Test;

(iii) Demonstration; or

(iv) Inspection.

(c) *New Hazards.* An operator must establish and document the criteria and techniques for identifying new hazards throughout the lifecycle of the launch or reentry system.

(d) *Completeness Prior to Flight.* For every launch or reentry, the flight hazard analysis must be complete and all hazards must be mitigated to an acceptable level in accordance with paragraph (b)(3) of this section.

(e) *Updates.* An operator must continually update the flight hazard analysis throughout the lifecycle of the launch or reentry system.

(f) *Application requirements.* An applicant must submit in its application the following:

(1) Flight hazard analysis products of paragraphs (b)(1) through (5) of this section, including data that verifies the risk elimination and mitigation measures resulting from the applicant's flight hazard analyses required by paragraph (b)(5) of this section; and

(2) The criteria and techniques for identifying new hazards throughout the lifecycle of the launch or reentry system as required by paragraph (c) of this section.

§ 450.110 Physical containment.

(a) *Applicability.* This section applies to the use of physical containment as a hazard control strategy for the flight, or phase of flight, of a launch or reentry vehicle to meet the safety criteria of § 450.101(a), (b), and (c).

(b) *Containment.* To use physical containment as a hazard control strategy, an operator must—

(1) Develop the flight hazard area in accordance with § 450.133;

(2) Ensure that the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area;

(3) Ensure the hazard area is clear of the public and critical assets; and

(4) Apply other mitigation measures necessary to ensure no public or critical asset exposure to hazards, such as control of public access or wind placards.

(c) *Application requirements.* An applicant must submit in its application the following:

(1) A demonstration that the launch vehicle does not have sufficient energy for any hazards associated with its flight to reach outside the flight hazard area developed in accordance with § 450.133; and

(2) A description of the methods used to ensure that flight hazard areas are cleared of the public and critical assets.

§ 450.111 Wind weighting.

(a) *Applicability.* This section applies to the use of wind weighting as a hazard control strategy for the flight of an unguided suborbital launch vehicle to meet the safety criteria of § 450.101(a), (b), and (c).

(b) *Wind weighting safety system.* The flight of an unguided suborbital launch vehicle that uses a wind weighting safety system must meet the following:

(1) The launcher azimuth and elevation settings must be wind weighted to correct for the effects of wind conditions at the time of flight to provide impact locations that will ensure compliance with the safety criteria in § 450.101; and

(2) An operator must use launcher azimuth and elevation angle settings that ensures the rocket will not fly in an unintended direction accounting for uncertainties in vehicle and launcher design and manufacturing, and atmospheric uncertainties.

(c) *Analysis.* An operator must—

(1) Establish flight commit criteria and other flight safety rules that control the risk to the public from potential adverse effects resulting from normal and malfunctioning flight;

(2) Establish any wind constraints under which flight may occur; and

(3) Conduct a wind weighting analysis that establishes the launcher azimuth and elevation settings that correct for the windcocking and wind-drift effects on the unguided suborbital launch vehicle.

(d) *Stability.* An unguided suborbital launch vehicle, in all configurations, must be stable throughout each stage of powered flight.

(e) *Application requirements.* An applicant must submit in its application the following:

(1) A description of its wind weighting analysis methods, including its method and schedule of determining wind speed and wind direction for each altitude layer;

(2) A description of its wind weighting safety system including all equipment used to perform the wind weighting analysis; and

(3) A representative wind weighting analysis using actual or statistical winds for the launch area and samples of the output.

Flight Safety Analyses

§ 450.113 Flight safety analysis requirements—scope.

(a) An operator must perform and document a flight safety analysis for all

phases of flight, except as specified in paragraph (b) of this section, as follows—

(1) For orbital launch, from liftoff through orbital insertion, and through all component impacts or landings;

(2) For suborbital launch, from liftoff through all component impacts or landings;

(3) For disposal, from the initiation of the deorbit through final impact; and

(4) For reentry, from the initiation of the deorbit through all component impacts or landing.

(b) An operator is not required to perform and document a flight safety analysis for a phase of flight if agreed to by the Administrator based on demonstrated reliability. An operator demonstrates reliability by using operational and flight history to show compliance with the risk criteria in § 450.101(a) and (b).

§ 450.115 Flight safety analysis methods.

(a) *Scope of the analysis.* An operator's flight safety analysis method must account for all reasonably foreseeable events and failures of safety-critical systems during nominal and non-nominal launch or reentry that could jeopardize public safety.

(b) *Level of fidelity of the analysis.* An operator's flight safety analysis method must have a level of fidelity sufficient to—

(1) Demonstrate that any risk to the public satisfies the safety criteria of § 450.101, including the use of mitigations, accounting for all known sources of uncertainty, using a means of compliance accepted by the Administrator; and

(2) Identify the dominant source of each type of public risk with a criterion in § 450.101(a) or (b) in terms of phase of flight, source of hazard (such as toxic exposure, inert, or explosive debris), and failure mode.

(c) *Application requirements.* An applicant must submit a description of the flight safety analysis methodology, including identification of:

(1) The scientific principles and statistical methods used;

(2) All assumptions and their justifications;

(3) The rationale for the level of fidelity;

(4) The evidence for validation and verification required by § 450.101(g);

(5) The extent to which the benchmark conditions are comparable to the foreseeable conditions of the intended operations; and

(6) The extent to which risk mitigations were accounted for in the analyses.

§ 450.117 Trajectory analysis for normal flight.

(a) *General.* A flight safety analysis must include a trajectory analysis that establishes, for any phase of flight within the scope as provided by § 450.113(a), the limits of a launch or reentry vehicle's normal flight as defined by the nominal trajectory, and the following sets of trajectories sufficient to characterize variability and uncertainty during normal flight:

(1) A set of trajectories to characterize variability. This set must describe how the intended trajectory could vary due to conditions known prior to initiation of flight; and

(2) A set of trajectories to characterize uncertainty. This set must describe how the actual trajectory could differ from the intended trajectory due to random uncertainties in all parameters with a significant influence on the vehicle's behavior throughout normal flight.

(b) *Trajectory model.* A final trajectory analysis must use a six-degree of freedom trajectory model to satisfy the requirements of paragraph (a) of this section.

(c) *Atmospheric effects.* A trajectory analysis must account for atmospheric conditions that have an effect on the trajectory, including atmospheric profiles that are no less severe than the worst conditions under which flight might be attempted, and for uncertainty in the atmospheric conditions.

(d) *Application requirements.* An applicant must submit the following:

(1) A description of the methods used to characterize the vehicle's flight behavior throughout normal flight, in accordance with § 450.115(c).

(2) The quantitative input data, including uncertainties, used to model the vehicle's normal flight in six degrees of freedom.

(3) The worst atmospheric conditions under which flight might be attempted, and a description of how the operator will evaluate the atmospheric conditions and uncertainty in the atmospheric conditions prior to initiating the operation;

(4) Representative normal flight trajectory analysis outputs, including the position velocity, and orientation for each second of flight for—

(i) The nominal trajectory;

(ii) A set of trajectories that characterize variability in the intended trajectory based on conditions known prior to initiation of flight; and

(iii) A set of trajectories that characterize how the actual trajectory could differ from the intended trajectory due to random uncertainties.

§ 450.119 Trajectory analysis for malfunction flight.

(a) *General.* A flight safety analysis must include a trajectory analysis that establishes—

(1) The vehicle's deviation capability in the event of a malfunction during flight,

(2) The trajectory dispersion resulting from reasonably foreseeable malfunctions, and

(3) For vehicles using flight abort as a hazard control strategy under § 450.108, trajectory data or parameters that describe the limits of a useful mission. The FAA does not consider the collection of data related to a failure to be a useful mission.

(b) *Analysis constraints.* A malfunction trajectory analysis must account for each cause of a malfunction flight, including software and hardware failures, for every period of normal flight. The analysis for each type of malfunction must have sufficient temporal and spatial resolution to establish flight safety limits, if any, and individual risk contours that are smooth and continuous. The analysis must account for—

(1) The relative probability of occurrence of each malfunction;

(2) The probability distribution of position and velocity of the vehicle when each malfunction trajectory will terminate due to vehicle breakup, ground impact, or orbital insertion along with the cause of termination and the state of the vehicle;

(3) The parameters with a significant influence on a vehicle's flight behavior from the time a malfunction begins to cause a flight deviation until the time each malfunction trajectory will terminate due to vehicle breakup, ground impact, or orbital insertion; and

(4) The potential for failure of the flight safety system, if any.

(c) *Application requirements.* An applicant must submit—

(1) A description of the methodology used to characterize the vehicle's flight behavior throughout malfunction flight, in accordance with § 450.115(c).

(2) A description of the methodology used to determine the limits of a useful mission, in accordance with § 450.115(c).

(3) A description of the input data used to characterize the vehicle's malfunction flight behavior, including:

(i) A list of each cause of malfunction flight considered;

(ii) A list of each type of malfunction flight for which malfunction flight behavior was characterized; and

(iii) A quantitative description of the parameters, including uncertainties, with a significant influence on the

vehicle's malfunction behavior for each type of malfunction flight characterized.

(4) Representative malfunction flight trajectory analysis outputs, including the position and velocity as a function of flight time for—

(i) Each set of trajectories that characterizes a type of malfunction flight;

(ii) The probability of each set of trajectories that characterizes a type of malfunction flight; and

(iii) A set of trajectories that characterizes the limits of a useful mission as described in paragraph (a)(3) of this section.

§ 450.121 Debris analysis.

(a) *General.* A flight safety analysis must include an analysis characterizing the hazardous debris generated from normal and malfunctioning vehicle flight as a function of vehicle flight sequence.

(b) *Vehicle impact and breakup analysis.* A debris analysis must account for:

(1) Each reasonably foreseeable cause of vehicle breakup and intact impact,

(2) Vehicle structural characteristics and materials, and

(3) Energetic effects during break-up or at impact.

(c) *Propagation of debris.* A debris analysis must compute statistically valid debris impact probability distributions. The propagation of debris from each predicted breakup location to impact must account for—

(1) All foreseeable forces that can influence any debris impact location; and

(2) All foreseeable sources of impact dispersion, including, at a minimum:

(i) The uncertainties in atmospheric conditions;

(ii) Debris aerodynamic parameters, including uncertainties;

(iii) Pre-breakup position and velocity, including uncertainties; and

(iv) Breakup-imparted velocities, including uncertainties.

(d) *Application requirements.* An applicant must submit:

(1) A description of all scenarios that can lead to hazardous debris;

(2) A description of the methods used to perform the vehicle impact and breakup analysis, in accordance with § 450.115(c);

(3) A description of the methods used to compute debris impact distributions, in accordance with § 450.115(c);

(4) A description of the atmospheric data used as input to the debris analysis; and

(5) A quantitative description of the physical, aerodynamic, and harmful characteristics of hazardous debris.

§ 450.123 Population exposure analysis.

(a) *General.* A flight safety analysis must account for the distribution of people for the entire region where there is a significant probability of impact of hazardous debris.

(b) *Constraints.* The exposure analysis must—

(1) Characterize the distribution of people both geographically and temporally;

(2) Account for the distribution of people among structures and vehicle types;

(3) Use reliable, accurate, and timely source data; and

(4) Account for vulnerability of people to hazardous debris effects.

(c) *Application requirements.* An applicant must submit:

(1) A description of the methods used to develop the exposure input data in accordance with § 450.115(c), and

(2) Complete population exposure data, in tabular form.

§ 450.131 Probability of failure analysis.

(a) *General.* For each hazard and phase of flight, a flight safety analysis for a launch or reentry must account for vehicle failure probability. The probability of failure must be consistent for all hazards and phases of flight.

(1) For a vehicle or vehicle stage with fewer than two flights, the failure probability estimate must account for the outcome of all previous flights of vehicles developed and launched or reentered in similar circumstances.

(2) For a vehicle or vehicle stage with two or more flights, vehicle failure probability estimates must account for the outcomes of all previous flights of the vehicle or vehicle stage in a statistically valid manner. The outcomes of all previous flights of the vehicle or vehicle stage must account for data on any mishap and anomaly.

(b) *Failure.* For flight safety analysis purposes, a failure occurs when a vehicle does not complete any phase of normal flight or when any anomalous condition exhibits the potential for a stage or its debris to impact the Earth or reenter the atmosphere outside the normal trajectory envelope during the mission or any future mission of similar vehicle capability.

(c) *Previous flight.* For flight safety analysis purposes—

(1) The flight of a launch vehicle begins at a time in which a launch vehicle lifts off from the surface of the Earth; and

(2) The flight of a reentry vehicle or deorbiting upper stage begins at a time in which a vehicle attempts to initiate a reentry.

(d) *Allocation.* The vehicle failure probability estimate must be distributed across flight phases and failure modes. The distribution must be consistent with—

(1) The data available from all previous flights of vehicles developed and launched or reentered in similar circumstances; and

(2) Data from previous flights of vehicles, stages, or components developed and launched, reentered, flown, or tested by the subject vehicle developer or operator. Such data may include previous experience involving similar—

(i) Vehicle, stage, or component design characteristics;

(ii) Development and integration processes, including the extent of integrated system testing; and

(iii) Level of experience of the vehicle operation and development team members.

(e) *Observed vs. conditional failure rate.* Probability of failure allocation must account for significant differences in the observed failure rate and the conditional failure rate. A probability of failure analysis must use a constant conditional failure rate for each phase of flight, unless there is clear and convincing evidence of a different conditional failure rate for a particular vehicle, stage, or phase of flight.

(f) *Application requirements.* An applicant must submit:

(1) A description of the methods used in probability of failure analysis, in accordance with § 450.115(c); and

(2) A representative set of tabular data and graphs of the predicted failure rate and cumulative failure probability for each foreseeable failure mode.

§ 450.133 Flight hazard area analysis.

(a) *General.* A flight safety analysis must include a flight hazard area analysis that identifies any region of land, sea, or air that must be surveyed, publicized, controlled, or evacuated in order to control the risk to the public. The analysis must account for, at a minimum—

(1) The regions of land, sea, and air potentially exposed to hazardous debris generated during normal flight events and all reasonably foreseeable failure modes;

(2) Any hazard controls implemented to control risk from any hazard;

(3) The limits of a launch or reentry vehicle's normal flight, including—

(i) Atmospheric conditions that are no less severe than the worst atmospheric conditions under which flight might be attempted; and

(ii) Uncertainty in the atmospheric conditions;

(4) All hazardous debris;

(5) Sources of debris dispersion in accordance with § 450.121(c); and

(6) A probability of one for any planned debris hazards or planned impacts.

(b) *Waterborne vessel hazard areas.* The flight hazard area analysis for waterborne vessels must determine the areas and durations for regions of water—

(1) That are necessary to contain, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty to persons on waterborne vessels;

(2) That are necessary to contain either where the probability of debris capable of causing a casualty impacting on or near a vessel would exceed 1×10^{-5}, accounting for all relevant hazards, or where the individual probability of casualty for any person on board a vessel would exceed the individual risk criteria in § 450.101(a)(2) or (b)(2); and

(3) Where reduced vessel traffic is necessary to meet the collective risk criteria in § 450.101(a)(1) or (b)(1).

(c) *Land hazard areas.* The flight hazard area analysis for land must determine the durations and areas regions of land—

(1) That are necessary to contain, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty to any person on land;

(2) Where the individual probability of casualty for any person on land would exceed the individual risk criteria in § 450.101(a)(2) or (b)(2); and

(3) Where reduced population is necessary to meet the collective risk criteria in § 450.101(a)(1) or (b)(1).

(d) *Airspace hazard volumes.* The flight hazard area analysis for airspace must determine the durations and volumes for regions of air to be submitted to the FAA for approval—

(1) That are necessary to contain, with 97 percent probability of containment, all debris resulting from normal flight events capable of causing a casualty to persons on an aircraft; and

(2) Where the probability of impact on an aircraft would exceed the aircraft risk criterion in § 450.101(a)(3) or (b)(3).

(e) *Application requirements.* An applicant must submit:

(1) A description of the methodology to be used in the flight hazard area analysis in accordance with § 450.115(c), including:

(i) Classes of waterborne vessel and vulnerability criteria employed; and

(ii) Classes of aircraft and vulnerability criteria employed.

(2) Tabular data and graphs of the results of the flight hazard area analysis, including:

(i) Geographical coordinates of all hazard areas that are representative of those to be published, in accordance with § 450.161, prior to any proposed operation;

(ii) Representative 97 percent probability of containment contours for all debris resulting from normal flight events capable of causing a casualty for all locations specified in paragraph (a) of this section;

(iii) Representative individual probability of casualty contours for all locations specified in paragraph (a) of this section, including tabular data and graphs showing the hypothetical location of any member of the public that could be exposed to a probability of casualty of 1×10^{-5} or greater for neighboring operations personnel, and 1×10^{-6} or greater for other members of the public, given all foreseeable conditions within the flight commit criteria;

(iv) If applicable, representative 1×10^{-5} and 1×10^{-6} probability of impact contours for all debris capable of causing a casualty to persons on a waterborne vessel regardless of location; and

(v) Representative 1×10^{-6} and 1×10^{-7} probability of impact contours for all debris capable of causing a casualty to persons on an aircraft regardless of location.

§ 450.135 Debris risk analysis.

(a) *General.* A flight safety analysis must include a debris risk analysis that demonstrates compliance with safety criteria in § 450.101, either—

(1) Prior to the day of the operation, accounting for all foreseeable conditions within the flight commit criteria; or

(2) During the countdown using the best available input data, including flight commit criteria and flight abort rules.

(b) *Casualty area and consequence analysis.* A debris risk analysis must model the casualty area, and compute the predicted consequences of each reasonably foreseeable failure mode in any significant period of flight in terms of conditional expected casualties. The casualty area and consequence analysis must account for—

(1) All relevant debris fragment characteristics and the characteristics of a representative person exposed to any potential debris hazard;

(2) Statistically-valid debris impact probability distributions;

(3) Any impact or effects of hazardous debris; and

(4) The vulnerability of people to debris impact or effects, including:

(i) Effects of buildings, ground vehicles, waterborne vessel, and aircraft upon the vulnerability of any occupants;

(ii) Effect of atmospheric conditions on debris impact and effects;

(iii) Impact speed and angle, accounting for motion of impacted vehicles;

(iv) Uncertainty in input data, such as fragment impact parameters; and

(v) Uncertainty in modeling methodology.

(c) *Application requirements.* An applicant must submit:

(1) A description of the methods used to demonstrate compliance with the safety criteria in § 450.101, in accordance with § 450.115(c), including a description of how the operator will account for the conditions immediately prior to enabling the flight of a launch vehicle or the reentry of a reentry vehicle, such as the final trajectory, atmospheric conditions, and the exposure of people;

(2) A description of the atmospheric data used as input to the debris risk analysis;

(3) The effective unsheltered casualty area for all fragment classes, assuming a representative impact vector;

(4) The effective casualty area for all fragment classes for a representative type of building, ground vehicle, waterborne vessel, and aircraft, assuming a representative impact vector;

(5) Collective and individual debris risk analysis outputs under representative conditions and the worst foreseeable conditions, including:

(i) Total collective casualty expectation for the proposed operation;

(ii) A list of the collective risk contribution for at least the top ten population centers and all centers with collective risk exceeding 1 percent of the collective risk criteria in § 450.101(a)(1) or (b)(1);

(iii) A list of the maximum individual probability of casualty for the top ten population centers and all centers that exceed 10 percent of the individual risk criteria in § 450.101(a)(2) or (b)(2); and

(iv) A list of the conditional collective casualty expectation for each failure mode for each significant period of flight under representative conditions and the worst foreseeable conditions.

§ 450.137 Far-field overpressure blast effects analysis.

(a) *General.* A flight safety analysis must include a far-field overpressure blast effect analysis that demonstrates compliance with safety criteria in § 450.101, either—

(1) Prior to the day of the operation, accounting for all foreseeable conditions within the flight commit criteria; or

(2) During the countdown using the best available input data, including flight commit criteria and flight abort rules.

(b) *Analysis constraints.* The analysis must account for—

(1) The explosive capability of the vehicle and hazardous debris at impact and at altitude;

(2) The potential influence of meteorological conditions and terrain characteristics; and

(3) The potential for broken windows due to peak incident overpressures below 1.0 psi and related casualties based on the characteristics of exposed windows and the population's susceptibility to injury, with considerations including, at a minimum, shelter types, window types, and the time of day of the proposed operation.

(c) *Application requirements.* An applicant must submit a description of the far-field overpressure analysis, including all assumptions and justifications for the assumptions, analysis methods, input data, and results. At a minimum, the application must include:

(1) A description of the population centers, terrain, building types, and window characteristics used as input to the far-field overpressure analysis;

(2) A description of the methods used to compute the foreseeable explosive yield probability pairs, and the complete set of yield-probability pairs, used as input to the far-field overpressure analysis;

(3) A description of the methods used to compute peak incident overpressures as a function of distance from the explosion and prevailing meteorological conditions, including sample calculations for a representative range of the foreseeable meteorological conditions, yields, and population center locations;

(4) A description of the methods used to compute the probability of window breakage, including tabular data and graphs for the probability of breakage as a function of the peak incident overpressure for a representative range of window types, building types, and yields accounted for;

(5) A description of the methods used to compute the probability of casualty for a representative individual, including tabular data and graphs for the probability of casualty, as a function of location relative to the window and the peak incident overpressure for a representative range of window types, building types, and yields accounted for;

(6) Tabular data and graphs showing the hypothetical location of any member of the public that could be exposed to a probability of casualty of 1×10^{-5} or greater for neighboring operations personnel, and 1×10^{-6} or greater for other members of the public, given foreseeable conditions;

(7) The maximum expected casualties that could result from far-field overpressure hazards given foreseeable conditions; and

(8) A description of the meteorological measurements used as input to any real-time far-field overpressure analysis.

§ 450.139 Toxic hazards for flight.

(a) *Applicability.* (1) Except as specified in paragraph (a)(2), this section applies to any launch or reentry vehicle, including all vehicle components and payloads, that use toxic propellants or other toxic chemicals.

(2) No toxic release hazard analysis is required for kerosene-based fuels, unless the Administrator determines that an analysis is required to protect public safety.

(b) *General.* An operator must—

(1) Conduct a toxic release hazard analysis in accordance with paragraph (c) of this section;

(2) Manage the risk of casualties that could arise from the exposure to toxic release through one of the following means:

(i) Contain hazards caused by toxic release in accordance with paragraph (d) of this section; or

(ii) Perform a toxic risk assessment, in accordance with paragraph (e) of this section, that protects the public in compliance with the safety criteria of § 450.101, including toxic release hazards.

(3) Establish flight commit criteria based on the results of its toxic release hazard analysis and toxic containment or toxic risk assessment for any necessary evacuation of the public from any toxic hazard area.

(c) *Toxic release hazard analysis.* A toxic release hazard analysis must—

(1) Account for any toxic release that could occur during nominal or non-nominal flight;

(2) Include a worst-case release scenario analysis or a maximum-credible release scenario analysis for each process that involves a toxic propellant or other chemical;

(3) Determine if toxic release can occur based on an evaluation of the chemical compositions and quantities of propellants, other chemicals, vehicle materials, and projected combustion products, and the possible toxic release scenarios;

(4) Account for both normal combustion products and any unreacted propellants and phase change or chemical derivatives of released substances; and

(5) Account for any operational constraints and emergency procedures that provide protection from toxic release.

(d) *Toxic containment.* An operator using toxic containment must manage the risk of any casualty from the exposure to toxic release either by—

(1) Evacuating, or being prepared to evacuate, the public from any toxic hazard area in the event of a worst-case release or maximum-credible release scenario; or

(2) Employing meteorological constraints to limit an operation to times during which prevailing winds and other conditions ensure that any member of the public would not be exposed to toxic concentrations and durations greater than accepted toxic thresholds for acute casualty in the event of a worst-case release or maximum-credible release scenario.

(e) *Toxic risk assessment.* An operator using toxic risk assessment must establish flight commit criteria that demonstrate compliance with the safety criteria of § 450.101. A toxic risk assessment must—

(1) Account for airborne concentration and duration thresholds of toxic propellants or other chemicals. For any toxic propellant, other chemicals, or combustion product, an operator must use airborne toxic concentration and duration thresholds identified in a means of compliance accepted by the Administrator;

(2) Account for physical phenomena expected to influence any toxic concentration and duration in the area surrounding the potential release site;

(3) Determine a toxic hazard area for the launch or reentry, surrounding the potential release site for each toxic propellant or other chemical based on the amount and toxicity of the propellant or other chemical, the exposure duration, and the meteorological conditions involved;

(4) Account for all members of the public who may be exposed to the toxic release, including all members of the public on land and on any waterborne vessels, populated offshore structures, and aircraft that are not operated in direct support of the launch or reentry; and

(5) Account for any risk mitigation measures applied in the risk assessment.

(f) *Application requirements.* An applicant must submit:

(1) The identity of toxic propellant, chemical, or combustion products or derivatives in the possible toxic release;

(2) The applicant's selected airborne toxic concentration and duration thresholds;

(3) The meteorological conditions for the atmospheric transport and buoyant cloud rise of any toxic release from its source to downwind receptor locations;

(4) Characterization of the terrain, as input for modeling the atmospheric transport of a toxic release from its source to downwind receptor locations;

(5) The identity of the toxic dispersion model used, and any other input data;

(6) Representative results of an applicant's toxic dispersion modeling to predict concentrations and durations at selected downwind receptor locations, to determine the toxic hazard area for a released quantity of the toxic substance;

(7) A toxic release hazard analysis in accordance with paragraph (c) of this section:

(i) A description of the failure modes and associated relative probabilities for potential toxic release scenarios used in the risk evaluation; and

(ii) The methodology and representative results of an applicant's determination of the worst-case or maximum-credible quantity of any toxic release that might occur during the flight of a vehicle;

(8) In accordance with § 450.139(b)(2),

(i) A toxic containment in accordance with paragraph (d) of this section, identify the evacuation plans or meteorological constraints and associated launch commit criteria needed to ensure that the public will not be within a toxic hazard area in the event of a worst-case release or maximum-credible release scenario; or

(ii) A toxic risk assessment in accordance with paragraph (e) of this section:

(A) A demonstration that the safety criteria in § 450.101 will be met;

(B) The population characteristics in receptor locations that are identified by toxic dispersion modeling as toxic hazard areas;

(C) A description of any risk mitigations applied in the toxic risk assessment; and

(D) A description of the population exposure input data used in accordance with § 450.123.

Prescribed Hazard Controls for Safety-Critical Hardware and Computing Systems

§ 450.141 Computing systems.

(a) *Identification of computing system safety items.* An operator must identify:

(1) Any software or data that implements a capability that, by intended operation, unintended operation, or non-operation, can present a hazard to the public; and

(2) The level of criticality of each computing system safety item identified in paragraph (a)(1) of this section, commensurate with its degree of control over hazards to the public and the severity of those hazards.

(b) *Safety requirements.* An operator must develop safety requirements for each computing system safety item. In doing so, the operator must:

(1) Identify and evaluate safety requirements for each computing system safety item;

(2) Ensure the safety requirements are complete and correct;

(3) Implement each safety requirement; and

(4) Verify and validate the implementation of each safety requirement by using a method appropriate for the level of criticality of the computing system safety item. For each computing system safety item that is safety critical under § 401.7, verification and validation must include testing by a test team independent of the development division or organization.

(c) *Development process.* An operator must implement and document a development process for computing system safety items appropriate for the level of criticality of the computing system safety item. A development process must define:

(1) Responsibilities for each task associated with a computing system safety item;

(2) Processes for internal review and approval—including review that evaluates the implementation of all safety requirements—such that no person approves that person's own work;

(3) Processes to ensure development personnel are trained, qualified, and capable of performing their role;

(4) Processes that trace requirements to verification and validation evidence;

(5) Processes for configuration management that specify the content of each released version of a computing system safety item;

(6) Processes for testing that verify and validate all safety requirements to the extent required by paragraph (b)(4) of this section;

(7) Reuse policies that verify and validate the safety requirements for reused computing system safety items; and

(8) Third-party product use policies that verify and validate the safety requirements for any third-party product.

(d) *Application requirements.* An applicant must:

(1) Identify and describe all computing system safety items involved in the proposed operations;

(2) Provide the safety requirements for each computing system safety item;

(3) Provide documentation of the development processes that meets paragraph (c) of this section;

(4) Provide evidence of the execution of the appropriate development process for each computing system safety item; and

(5) Provide evidence of the implementation of each safety requirement.

§ 450.143 Safety-critical system design, test, and documentation.

(a) *Applicability.* This section applies to all safety-critical systems, except for—

(1) Highly reliable flight safety systems covered under § 450.145; or

(2) Safety-critical systems for which an operator demonstrates through its flight hazard analysis that the likelihood of any hazardous condition specifically associated with the system that may cause death or serious injury to the public is extremely remote, pursuant to § 450.109(b)(3).

(b) *Design.* An operator must design safety-critical systems such that no credible fault can lead to increased risk to the public beyond nominal safety-critical system operation.

(c) *Qualification testing of design.* An operator must functionally demonstrate the design of the vehicle's safety-critical systems at conditions beyond its predicted operating environments. The operator must select environmental test levels that ensure the design is sufficiently stressed to demonstrate that system performance is not degraded due to design tolerances, manufacturing variances, or uncertainties in the environment.

(d) *Acceptance of hardware.* An operator must—

(1) Functionally demonstrate any safety-critical system, while exposed to its predicted operating environments with margin, is free of defects, free of integration and workmanship errors, and ready for operational use; or

(2) Combine in-process controls and a quality assurance process to ensure functional capability of any safety-critical system during its service life.

(e) *Lifecycle of safety-critical systems.* (1) The predicted operating environments must be based on conditions predicted to be encountered in all phases of flight, recovery, and transportation.

(2) An operator must monitor the flight environments experienced by safety-critical system components to the extent necessary to—

(i) Validate the predicted operating environments; and

(ii) Assess the actual component life remaining or adjust any inspection period.

(f) *Application requirements.* An applicant must submit to the FAA the following as part of its application:

(1) A list and description of each safety-critical system;

(2) Drawings and schematics for each safety-critical system;

(3) A summary of the analysis to determine the predicted operating environments and duration to be applied to qualification and acceptance testing covering the service life of any safety-critical system;

(4) A description of any method used to validate the predicted operating environments;

(5) A description of any instrumentation or inspection processes to monitor aging of any safety-critical system;

(6) The criteria and procedures for disposal or refurbishment for service life extension of safety-critical system components; and

(7) A description of the standards used in all phases of the lifecycle of each safety-critical system.

§ 450.145 Highly reliable flight safety system.

(a) *General.* For each phase of flight for which an operator must implement flight abort to meet the requirement of § 450.108(b)(1), the operator must use a highly reliable flight safety system on the launch or reentry vehicle, vehicle component, or payload with a design reliability in accordance with this section.

(b) *Reliability.* A highly reliable flight safety system must, using a means of compliance accepted by the Administrator—

(1) Have a design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing for the portion of the flight safety system onboard the vehicle; and

(2) Have a design reliability of 0.999 at 95 percent confidence and commensurate design, analysis, and testing for the portion of the flight safety system not onboard the vehicle, if used.

(c) *Monitoring.* An operator must monitor the flight environments experienced by any flight safety system component to the extent necessary to—

(1) Validate the predicted operating environment; and

(2) Assess the actual component life remaining or adjust any inspection period.

(d) *Application requirements.* An applicant must submit the information identified below, for any highly reliable flight safety system:

(1) *Flight safety system description.* An applicant must describe the flight safety system and its operation in detail, including all components, component functions, and possible operational scenarios.

(2) *Flight safety system diagram.* An applicant must submit a diagram that identifies all flight safety system subsystems and shows the interconnection of all the elements of the flight safety system. The diagram must include any subsystems used to implement flight abort both on and off the vehicle, including any subsystems used to make the decision to abort flight.

(3) *Flight safety system analyses.* An applicant must submit any analyses and detailed analysis reports of all flight safety system subsystems necessary to calculate the reliability and confidence levels required by paragraph (a) of this section.

(4) *Tracking validation procedures.* An applicant must document and submit the procedures for validating the accuracy of any vehicle tracking data utilized by the flight safety system to make the decision to abort flight.

(5) *Flight safety system test plans.* An applicant must submit acceptance, qualification, and preflight test plans of any flight safety system, subsystems, and components. The test plans must include test procedures and test environments.

(6) *Monitoring plan.* An applicant must submit a description of any method used to validate the predicted operating environments.

Other Prescribed Hazard Controls

§ 450.147 Agreements.

(a) *General.* An operator must establish a written agreement with any entity that provides a service or property that meets a requirement in this part, including:

(1) *Launch and reentry site use agreements.* A Federal launch or reentry site operator, a licensed launch or reentry site operator, or any other person that provides services or access to or use of property required to support the safe launch or reentry under this part;

(2) *Agreements for notices to mariners.* Unless otherwise addressed in agreements with the site operator, for overflight of navigable water, the U.S. Coast Guard or other applicable maritime authority to establish procedures for the issuance of a Notice to Mariners prior to a launch or reentry and other measures necessary to protect public health and safety;

(3) *Agreements for notices to airmen.* Unless otherwise addressed in agreements with the site operator, the FAA Air Traffic Organization or other applicable air navigation authority to establish procedures for the issuance of a Notice to Airmen prior to a launch or reentry, for closing of air routes during the respective launch and reentry windows, and for other measures necessary to protect public health and safety; and

(4) *Mishap response.* Emergency response providers, including local government authorities, to satisfy the requirements of § 450.173.

(b) *Roles and responsibilities.* The agreements required in this section must clearly delineate the roles and responsibilities of each party to support the safe launch or reentry under this part.

(c) *Effective date.* The agreements required in this section must be in effect before a license can be issued, unless otherwise agreed to by the Administrator.

(d) *Application requirements.* An applicant must—

(1) Describe each agreement in this section; and

(2) Provide a copy of any agreement, or portion thereof, to the FAA upon request.

§ 450.149 Safety-critical personnel qualifications.

(a) *General.* An operator must ensure safety-critical personnel are trained, qualified, and capable of performing their safety-critical tasks, and that their training is current.

(b) *Application requirements.* An applicant must—

(1) Identify safety-critical tasks that require qualified personnel;

(2) Provide internal training and currency requirements, completion standards, or any other means of demonstrating compliance with the requirements of this section; and

(3) Describe the process for tracking training currency.

§ 450.151 Work shift and rest requirements.

(a) *General.* For any launch or reentry, an operator must document and implement rest requirements that ensure safety-critical personnel are physically and mentally capable of performing all assigned tasks.

(b) *Work shifts and deviation approval process.* An operator's rest requirements must address the following:

(1) Duration of each work shift and the process for extending this shift, including the maximum allowable length of any extension;

(2) Number of consecutive work shift days allowed before rest is required;

(3) Minimum rest period required—

(i) Between each work shift, including the period of rest required immediately before the flight countdown work shift; and

(ii) After the maximum number of work shift days allowed; and

(4) Approval process for any deviation from the rest requirements.

(c) *Application requirement.* An applicant must submit rest rules that demonstrate compliance with the requirements of this section.

§ 450.153 Radio frequency management.

(a) *General.* For any radio frequency used, an operator must—

(1) Ensure radio frequency interference does not adversely affect performance of any flight safety system or safety-critical system; and

(2) Coordinate use of radio frequencies with any site operator and any local and Federal authorities.

(b) *Application requirements.* An applicant must submit procedures or other means to demonstrate compliance with the radio frequency requirements of this section.

§ 450.155 Readiness.

(a) *General.* An operator must document and implement procedures to assess readiness to proceed with the flight of a launch or reentry vehicle. These procedures must address, at a minimum, the following:

(1) Readiness of vehicle and launch, reentry, or landing site, including any contingency abort location;

(2) Readiness of safety-critical personnel, systems, software, procedures, equipment, property, and services; and

(3) Readiness to implement the mishap plan required by § 450.173.

(b) *Application requirements.* An applicant must—

(1) Demonstrate compliance with the requirements of paragraph (a) of this section through procedures that may include a readiness meeting close in time to flight; and

(2) Describe the criteria for establishing readiness to proceed with the flight of a launch or reentry vehicle so that public safety is maintained.

§ 450.157 Communications.

(a) An operator must implement communication procedures during the countdown and flight of a launch or reentry vehicle that—

(1) Define the authority of personnel, by individual or position title, to issue ''hold/resume,'' ''go/no go,'' and abort commands;

(2) Assign communication networks so that personnel identified in paragraph (a)(1) of this section have direct access to real-time, safety-critical information required to issue ''hold/resume,'' ''go/no go,'' and any abort commands; and

(3) Implement a protocol for using defined radio telephone communications terminology.

(b) An operator must ensure the currency of the communication procedures, and that all personnel are working with the approved version of the communication procedures.

(c) An operator must record all safety-critical communications network channels that are used for voice, video, or data transmissions that support safety-critical systems during each countdown.

§ 450.159 Pre-flight procedures.

(a) An operator must implement pre-flight procedures that—

(1) Verify that each flight commit criterion is satisfied before flight is initiated; and

(2) Ensure the operator can return the vehicle to a safe state after a countdown abort or delay.

(b) An operator must ensure the currency of the pre-flight procedures, and that all personnel are working with the approved version of the pre-flight procedures.

§ 450.161 Control of hazard areas.

(a) *General.* The operator must publicize, survey, control, or evacuate each flight hazard area identified in accordance with § 450.133 prior to initiating flight of a launch vehicle or the reentry of a reentry vehicle to the extent necessary to ensure compliance with § 450.101.

(b) *Verification.* The launch or reentry operator must perform surveillance sufficient to verify or update the assumptions, input data, and results of the flight safety analyses.

(c) *Publication.* An operator must publicize warnings for each flight hazard area, except for regions of land, sea, or air under the control of the vehicle operator, site operator, or other controlling authority with which the operator has an agreement. If the operator relies on another entity to publicize these warnings, it must:

(1) Determine whether the warnings have been issued; and

(2) Notify the FAA if the warnings have not been issued so that the FAA can determine if the launch or reentry can be conducted in a manner that sufficiently protects the public. This notification must provide sufficient information to enable FAA to issue warnings to U.S. aircraft.

(d) *Application requirements.* An applicant must submit—

(1) A description of how the applicant will provide for day-of-flight surveillance and control of flight hazard areas, if necessary, to ensure that the presence of any member of the public in or near a flight hazard area is consistent with flight commit criteria developed for each launch or reentry as required by § 450.165(b);

(2) A description of how the applicant will provide for any publication of flight hazard areas necessary to meet the requirements of this section; and

(3) A description of how the applicant will establish flight commit criteria based on the results of its toxic release hazard analysis, toxic containment, or toxic risk assessment for any necessary evacuation of the public from any toxic hazard area.

§ 450.163 Lightning hazard mitigation.

(a) *Lightning hazard mitigation.* An operator must—

(1) Establish flight commit criteria that mitigate the potential for a launch or reentry vehicle intercepting or initiating a direct lightning strike, or encountering a nearby discharge, using a means of compliance accepted by the Administrator; or

(2) Use a vehicle designed to protect safety-critical systems in the event of a direct lightning strike or nearby discharge.

(b) *Application requirements.* (1) An applicant electing to comply with paragraph (a)(1) of this section must submit flight commit criteria that mitigate the potential for a launch or reentry vehicle intercepting or initiating a direct lightning strike, or encountering a nearby lightning discharge.

(2) An applicant electing to comply with paragraph (a)(2) of this section must submit documentation providing evidence that the vehicle is designed to protect safety-critical systems against the effects of a direct lightning strike or nearby discharge.

§ 450.165 Flight commit criteria.

(a) *General.* For each launch or reentry, an operator must establish and observe flight commit criteria that identify each condition necessary prior to flight to satisfy the requirements of § 450.101, and must include:

(1) Surveillance of any region of land, sea, or air in accordance with § 450.161;

(2) Monitoring of any meteorological condition necessary to—

(i) Be consistent with any safety analysis required by this part; and

(ii) If necessary in accordance with § 450.163, mitigate the potential for a launch or reentry vehicle intercepting a lightning strike, or encountering a nearby discharge;

(3) Implementation of any launch or reentry window closure in the launch or reentry window for the purpose of collision avoidance in accordance with § 450.169;

(4) Confirmation that any safety-critical system is ready for flight;

(5) Confirmation from the FAA that the risk to critical assets satisfies the requirements of § 450.101(a)(4) or (b)(4);

(6) For any reentry vehicle, except a suborbital vehicle, monitoring by the operator or an onboard system that the status of safety-critical systems is healthy before enabling reentry flight, to assure the vehicle can reenter safely to Earth; and

(7) Any other hazard controls derived from any safety analysis required by this part.

(b) *Application requirements.* An applicant must submit a list of all flight commit criteria.

§ 450.167 Tracking.

(a) *General.* During the flight of a launch or reentry vehicle, an operator must measure and record in real time the position and velocity of the vehicle. The system used to track the vehicle must provide data to predict the expected impact locations of all stages and components, and to obtain vehicle performance data for comparison with the pre-flight performance predictions.

(b) *Application requirements.* An applicant must identify and describe each method or system used to meet the tracking requirements of paragraph (a) of this section.

§ 450.169 Launch and reentry collision avoidance analysis requirements.

(a) *Criteria.* Except as provided in paragraph (d) of this section, for an orbital or suborbital launch or reentry, an operator must establish window closures needed to ensure that the launch or reentry vehicle, any jettisoned components, or payloads meet the following requirements with respect to orbiting objects, not including any object being launched or reentered.

(1) For inhabitable objects, one of three criteria below must be met:

(i) The probability of collision between the launching or reentering objects and any inhabitable object must not exceed 1×10^{-6};

(ii) The launching or reentering objects must maintain an ellipsoidal separation distance of 200 km in-track and 50 km cross-track and radially from the inhabitable object; or

(iii) The launching or reentering objects must maintain a spherical separation distance of 200 km from the inhabitable object.

(2) For objects that are neither orbital debris nor inhabitable, one of the two criteria below must be met:

(i) The probability of collision between the launching or reentering objects and any object must not exceed 1×10^{-5}; or

(ii) The launching or reentering objects must maintain a spherical separation distance of 25 km from the object.

(3) For all other known orbital debris identified by the FAA or other Federal Government entity as large objects with radar cross section greater than 1 m^2 and medium objects with radar cross section 0.1 m^2 to 1 m^2:

(i) The probability of collision between the launching or reentering objects and any known orbital debris must not exceed 1×10^{-5}; or

(ii) The launching or reentering objects must maintain a spherical separation distance of 2.5 km.

(b) *Screening time.* A launch or reentry operator must ensure the requirements of paragraph (a) of this section are met as follows:

(1) Through the entire segment of flight of a suborbital launch vehicle above 150 km;

(2) For an orbital launch, during ascent from a minimum of 150 km to initial orbital insertion and for a minimum of 3 hours from liftoff;

(3) For reentry, during descent from initial reentry burn to 150 km altitude; and

(4) For disposal, during descent from initial disposal burn to 150 km altitude.

(c) *Rendezvous.* Planned rendezvous operations that occur within the screening time frame are not considered a violation of collision avoidance if the involved operators have pre-coordinated the rendezvous or close approach.

(d) *Exception.* A launch collision avoidance analysis is not required for any launched object if the maximum planned altitude by that object is less than 150 km.

(e) *Analysis.* Collision avoidance analysis must be obtained for each launch or reentry from a Federal entity identified by the FAA, or another entity agreed to by the Administrator.

(1) An operator must use the results of the collision avoidance analysis to establish flight commit criteria for collision avoidance; and

(2) The collision avoidance analysis must account for uncertainties associated with launch or reentry vehicle performance and timing, and ensure that each window closure incorporates all additional time periods associated with such uncertainties.

(f) *Timing and information required.* An operator must prepare a collision avoidance analysis worksheet for each launch or reentry using a standardized format that contains the input data required by appendix A to this part, as follows:

(1) Except as specified in paragraphs (f)(1)(i) and (ii) of this section, an operator must file the input data with an entity identified in paragraph (e) of this section and the FAA at least 7 days before the first attempt at the flight of a launch vehicle or the reentry of a reentry vehicle.

(i) Operators that have never received a launch or reentry conjunction assessment from the entity identified in paragraph (e) of this section, must file the input data at least 15 days in advance.

(ii) The Administrator may agree to an alternative time frame in accordance with § 404.15;

(2) An operator must obtain a collision avoidance analysis performed by an entity identified in paragraph (e) of this section, no later than 3 hours before the beginning of a launch or reentry window; and

(3) If an operator needs an updated collision avoidance analysis due to a launch or reentry delay, the operator must file the request with the entity identified in paragraph (e) of this section and the FAA at least 12 hours prior to the beginning of the new launch or reentry window.

§ 450.171 Safety at end of launch.

(a) *Orbital debris mitigation.* An operator must ensure for any proposed launch that for all vehicle stages or components that reach Earth orbit—

(1) There is no unplanned physical contact between the vehicle or any of its components and the payload after payload separation;

(2) Debris generation does not result from the conversion of energy sources into energy that fragments the vehicle or its components. Energy sources include chemical, pressure, and kinetic energy; and

(3) For all vehicle stages or components that are left in orbit, stored energy is removed by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy.

(b) *Application requirement.* An applicant must demonstrate compliance with the requirements in paragraph (a) of this section.

§ 450.173 Mishap plan—reporting, response, and investigation requirements.

(a) *General.* An operator must report, respond to, and investigate mishaps, as

defined in § 401.7 of this chapter, in accordance with paragraphs (b) through (g) of this section using a plan or other written means.

(b) *Responsibilities.* An operator must document—

(1) Responsibilities for personnel assigned to implement the requirements of this section;

(2) Reporting responsibilities for personnel assigned to conduct investigations and for anyone retained by the operator to conduct or participate in investigations; and

(3) Allocation of roles and responsibilities between the launch operator and any site operator for reporting, responding to, and investigating any mishap during ground activities at the site.

(c) *Mishap reporting requirements.* An operator must—

(1) Immediately notify the FAA Washington Operations Center in case of a mishap that involves a fatality or serious injury (as defined in 49 CFR 830.2);

(2) Notify within 24 hours the FAA Washington Operations Center in the case of a mishap that does not involve a fatality or serious injury (as defined in 49 CFR 830.2); and

(3) Submit a written preliminary report to the FAA Office of Commercial Space Transportation within five days of any mishap. The preliminary report must include the following information, as applicable:

(i) Date and time of the mishap;

(ii) Description of the mishap and sequence of events leading to the mishap, to the extent known;

(iii) Intended and actual location of the launch or reentry or other landing on Earth;

(iv) Hazardous debris impact points, including those outside a planned landing site or designated hazard area;

(v) Identification of the vehicle;

(vi) Identification of any payload;

(vii) Number and general description of any fatalities or injuries;

(viii) Description and estimated costs of any property damage;

(ix) Identification of hazardous materials, as defined in § 401.7 of this chapter, involved in the event, whether on the vehicle, any payload, or on the ground;

(x) Action taken by any person to contain the consequences of the event;

(xi) Weather conditions at the time of the event; and

(xii) Potential consequences for other similar vehicles, systems, or operations.

(d) *Emergency response requirements.* An operator must—

(1) Activate emergency response services to protect the public and property following a mishap as necessary including, but not limited to:

(i) Evacuating and rescuing members of the public, taking into account debris dispersion and toxic plumes; and

(ii) Extinguishing fires;

(2) Maintain existing hazard area surveillance and clearance as necessary to protect public safety;

(3) Contain and minimize the consequences of a mishap, including:

(i) Securing impact areas to ensure that no members of the public enter;

(ii) Safely disposing of hazardous materials; and

(iii) Controlling hazards at the site or impact areas.

(4) Preserve data and physical evidence; and

(5) Implement agreements with government authorities and emergency response services, as necessary, to satisfy the requirements of this section.

(e) *Mishap investigation requirements.* In the event of a mishap, an operator must—

(1) Investigate the root causes of the mishap; and

(2) Report investigation results to the FAA.

(f) *Preventative measures.* An operator must identify and implement preventive measures for avoiding recurrence of the mishap prior to the next flight, unless otherwise approved by the Administrator.

(g) *Mishap records.* An operator must maintain records associated with the mishap in accordance with § 450.219(b).

(h) *Application requirements.* An applicant must submit the plan or other written means required by this section.

§ 450.175 Test-induced damage.

(a) *Applicability.* This section applies to license applicants or operators seeking an optional test-induced damage exception.

(b) *Coordination of potential test-induced damage.* Test-induced damage is not a mishap if all of the following are true:

(1) A license applicant or operator coordinates potential test-induced damage with the FAA before the planned activity, and with sufficient time for the FAA to evaluate the operator's proposal during the application process or as a license modification;

(2) The test-induced damage did not result in any of the following:

(i) Serious injury or fatality (as defined in 49 CFR 830.2);

(ii) Damage to property not associated with the licensed activity; or

(iii) Hazardous debris leaving the pre-defined hazard area; and

(3) The test-induced damage falls within the scope of activities coordinated with the FAA in paragraph (b)(1) of this section.

(c) *Application requirements.* An applicant must submit the following information—

(1) Test objectives;

(2) Test limits;

(3) Expected outcomes;

(4) Potential risks, including the applicant's best understanding of the uncertainties in environments, test limits, or system performance;

(5) Applicable procedures;

(6) Expected time and duration of the test; and

(7) Additional information as required by the FAA to ensure protection of public health and safety, safety of property, and the national security and foreign policy interests of the United States.

§ 450.177 Unique safety policies, requirements, and practices.

(a) *Unique hazards.* An operator must review operations, system designs, analysis, and testing, and identify any unique hazards not otherwise addressed by this part. An operator must implement any unique safety policy, requirement, or practice needed to protect the public from the unique hazard.

(b) *Unique requirements.* The FAA may identify and impose a unique policy, requirement, or practice as needed to protect the public health and safety.

(c) *Application requirements.* An applicant must—

(1) Identify any unique safety policy, requirement, or practice necessary in accordance with paragraph (a) of this section, and demonstrate that each unique safety policy, requirement, or practice protects public health and safety.

(2) Demonstrate compliance with each unique safety policy, requirement, or practice imposed by the FAA in accordance with paragraph (b) of this section.

Ground Safety

§ 450.179 Ground safety—general.

(a) At a U.S. launch or reentry site, an operator must protect the public and property from adverse effects of hazardous operations and systems associated with—

(1) Preparing a launch vehicle for flight;

(2) Returning a launch or reentry vehicle to a safe condition after landing, or after an aborted launch attempt; and

(3) Returning a site to a safe condition.

(b) An operator is not required to comply with §§ 450.181 through 450.189 of this part if:

(1) The launch or reentry is being conducted from a Federal launch or reentry site;

(2) The operator has a written agreement with the Federal launch or reentry site for the provision of ground safety services and oversight; and

(3) The Administrator has determined that the Federal launch or reentry site's ground safety processes, requirements, and oversight are not inconsistent with the Secretary's statutory authority over commercial space activities.

(c) In making the determination required by paragraph (b)(3) of this section, the Administrator will consider the nature and frequency of launch and reentry activities conducted from the Federal launch or reentry site, coordination between the FAA and the Federal launch or reentry site safety personnel, and the Administrator's knowledge of the Federal launch or reentry site's requirements.

§ 450.181 Coordination with a site operator.

(a) *General.* For a launch or reentry conducted from or to a Federal launch or reentry site or a site licensed under part 420 or 433 of this chapter, an operator must coordinate with the site operator to—

(1) Ensure public access is controlled where and when necessary to protect public safety;

(2) Ensure launch or reentry operations are coordinated with other launch and reentry operators and other affected parties to prevent unsafe interference;

(3) Designate any ground hazard area that affects the operations of a launch or reentry site; and

(4) Ensure a prompt and effective response is undertaken in the event of a mishap that could impact the safety of the public and property.

(b) *Licensed site operator.* For a launch or reentry conducted from or to a site licensed under part 420 or 433 of this chapter, an operator must also coordinate with the site operator to establish roles and responsibilities for reporting, responding to, and investigating any mishap during ground activities at the site.

(c) *Application requirement.* An applicant must describe how it is coordinating with a Federal or licensed launch or reentry site operator in compliance with this section.

§ 450.183 Explosive site plan.

(a) *Explosive siting requirements.* For a launch or reentry conducted from or to a site exclusive to its own use, an operator must comply with the explosive siting requirements of §§ 420.63, 420.65, 420.66, 420.67, 420.69, and 420.70 of this chapter.

(b) *Application requirement.* An applicant must submit an explosive site plan in accordance with paragraph (a) of this section.

§ 450.185 Ground hazard analysis.

An operator must perform and document a ground hazard analysis, and continue to maintain it throughout the lifecycle of the launch or reentry system. The analysis must—

(a) *Hazard identification.* Identify system and operation hazards posed by the vehicle and ground hardware, including site and ground support equipment. Hazards identified must include the following:

(1) System hazards, including:

(i) Vehicle over-pressurization;

(ii) Sudden energy release, including ordnance actuation;

(iii) Ionizing and non-ionizing radiation;

(iv) Fire or deflagration;

(v) Radioactive materials;

(vi) Toxic release;

(vii) Cryogens;

(viii) Electrical discharge; and

(ix) Structural failure.

(2) Operation hazards, including:

(i) Propellant handling and loading;

(ii) Transporting of vehicle or vehicle components;

(iii) Vehicle testing; and

(iv) Vehicle or system activation.

(b) *Hazard assessment.* Assess each hazard's likelihood and severity.

(c) *Risk acceptability criteria.* Ensure that the risk associated with each hazard meets the following criteria:

(1) The likelihood of any hazardous condition that may cause death or serious injury to the public must be extremely remote; and

(2) The likelihood of any hazardous condition that may cause major damage to property not associated with the launch or reentry must be remote.

(d) *Risk mitigation.* Identify and describe the risk elimination and mitigation measures required to satisfy paragraph (c) of this section.

(e) *Validation and verification.* Document that the risk elimination and mitigation measures achieve the risk levels of paragraph (c) of this section through validation and verification. Verification includes:

(1) Analysis;

(2) Test;

(3) Demonstration; or

(4) Inspection.

(f) *Application requirements.* An applicant must submit—

(1) A description of the methodology used to perform the ground hazard analysis;

(2) A list of all systems and operations that may cause a hazard involving the vehicle or any payload; and

(3) The ground hazard analysis products of paragraphs (a) through (e) of this section, including data that verifies the risk elimination and mitigation measures.

§ 450.187 Toxic hazards mitigation for ground operations.

(a) *Applicability.* (1) Except as specified in paragraph (a)(2), this section applies to any launch or reentry vehicle, including all vehicle components and payloads, that use toxic propellants or other toxic chemicals.

(2) No toxic release hazard analysis is required for kerosene-based fuels, unless the Administrator determines that an analysis is required to protect public safety.

(b) *General.* An operator must—

(1) Conduct a toxic release hazard analysis in accordance with paragraph (c) of this section;

(2) Manage the risk of casualties that could arise from the exposure to toxic release through one of the following means:

(i) Contain hazards caused by toxic release in accordance with paragraph (d) of this section; or

(ii) Perform a toxic risk assessment, in accordance with paragraph (e) of this section, that demonstrates compliance with the risk criteria of § 450.185(c).

(3) Establish ground hazard controls based on the results of its toxic release hazard analysis and toxic containment or toxic risk assessment for any necessary evacuation of the public from any toxic hazard area.

(c) *Toxic release hazard analysis.* A toxic release hazard analysis must—

(1) Account for any toxic release that could occur during nominal or non-nominal launch or reentry ground operations;

(2) Include a worst-case release scenario analysis or a maximum-credible release scenario analysis for each process that involves a toxic propellant or other chemical;

(3) Determine if toxic release can occur based on an evaluation of the chemical compositions and quantities of propellants, other chemicals, vehicle materials, and projected combustion products, and the possible toxic release scenarios;

(4) Account for both normal combustion products and any unreacted propellants and phase change or chemical derivatives of released substances; and

(5) Account for any operational constraints and emergency procedures

that provide protection from toxic release.

(d) *Toxic containment.* An operator using toxic containment must manage the risk of casualty from the exposure to toxic release either by—

(1) Evacuating, or being prepared to evacuate, the public from any toxic hazard area in the event of a worst-case release or maximum credible release scenario; or

(2) Employing meteorological constraints to limit a ground operation to times during which prevailing winds and other conditions ensure that the public would not be exposed to toxic concentrations and durations greater than accepted toxic thresholds for acute casualty in the event of a worst-case release or maximum credible release scenario.

(e) *Toxic risk assessment.* An operator using toxic risk assessment must manage the risk from any toxic release hazard and demonstrate compliance with the criteria in § 450.185(c). A toxic risk assessment must—

(1) Account for airborne concentration and duration thresholds of toxic propellants or other chemicals. For any toxic propellant, other chemicals, or combustion product, an operator must use airborne toxic concentration and duration thresholds identified in a means of compliance accepted by the Administrator;

(2) Account for physical phenomena expected to influence any toxic concentration and duration in the area surrounding the potential release site;

(3) Determine a toxic hazard area for each process surrounding the potential release site for each toxic propellant or other chemical based on the amount and toxicity of the propellant or other chemical, the exposure duration, and the meteorological conditions involved;

(4) Account for all members of the public that may be exposed to the toxic release; and

(5) Account for any risk mitigation measures applied in the risk assessment.

(f) *Application requirements.* An applicant must submit:

(1) The identity of the toxic propellant, chemical, or combustion products or derivatives in the possible toxic release;

(2) The applicant's selected airborne toxic concentration and duration thresholds;

(3) The meteorological conditions for the atmospheric transport and buoyant cloud rise of any toxic release from its source to downwind receptor locations;

(4) Characterization of the terrain, as input for modeling the atmospheric transport of a toxic release from its source to downwind receptor locations;

(5) The identity of the toxic dispersion model used, and any other input data;

(6) Representative results of an applicant's toxic dispersion modeling to predict concentrations and durations at selected downwind receptor locations, to determine the toxic hazard area for a released quantity of the toxic substance;

(7) For toxic release hazard analysis in accordance with paragraph (c) of this section:

(i) A description of the failure modes and associated relative probabilities for potential toxic release scenarios used in the risk evaluation; and

(ii) The methodology and representative results of an applicant's determination of the worst-case or maximum-credible quantity of any toxic release that might occur during ground operations;

(8) For toxic containment in accordance with paragraph (d) of this section, identify the evacuation plans or meteorological constraints and associated ground hazard controls needed to ensure that the public will not be within any toxic hazard area in the event of a worst-case release or maximum credible release scenario.

(9) For toxic risk assessment in accordance with paragraph (e) of this section:

(i) A demonstration that the risk criteria in § 450.185(c) will be met;

(ii) The population characteristics in receptor locations that are identified by toxic dispersion modeling as toxic hazard areas;

(iii) A description of any risk mitigation measures applied in the toxic risk assessment; and

(iv) A description of the population exposure input data used in accordance with § 450.123.

§ 450.189 Ground safety prescribed hazard controls.

(a) *General.* In addition to the hazard controls derived from an operator's ground hazard analysis and toxic hazard analysis, an operator must comply with paragraphs (b) through (e) of this section.

(b) *Protection of public on the site.* An operator must document a process for protecting members of the public who enter any area under the control of a launch or reentry operator, including:

(1) Procedures for identifying and tracking the public while on the site; and

(2) Methods the operator uses to protect the public from hazards in accordance with the ground hazard analysis and toxic hazard analysis.

(c) *Countdown abort.* Following a countdown abort or recycle operation, an operator must establish, maintain, and perform procedures for controlling hazards related to the vehicle and returning the vehicle, stages, or other flight hardware and site facilities to a safe condition. When a launch vehicle does not liftoff after a command to initiate flight was sent, an operator must—

(1) Ensure that the vehicle and any payload are in a safe configuration;

(2) Prohibit entry of the public into any identified hazard areas until the site is returned to a safe condition; and

(3) Maintain and verify that any flight safety system remains operational until verification that the launch vehicle does not represent a risk of inadvertent flight.

(d) *Fire suppression.* An operator must have reasonable precautions in place to report and control any fire caused by licensed activities.

(e) *Emergency procedures.* An operator must have general emergency procedures that apply to any emergencies not covered by the mishap plan of § 450.173 that may create a hazard to the public.

(f) *Application requirement.* An applicant must submit the process for protecting members of the public who enter any area under the control of a launch or reentry operator in accordance with paragraph (b) of this section.

Subpart D—Terms and Conditions of a Vehicle Operator License

§ 450.201 Responsibility for public safety and safety of property.

A licensee is responsible for ensuring public safety and safety of property during the conduct of a licensed launch or reentry.

§ 450.203 Compliance.

A licensee must conduct a licensed launch or reentry in accordance with representations made in its license application, the requirements of subparts C and D of this part, and the terms and conditions contained in the license. A licensee's failure to act in accordance with the representations made in the license application, the requirements of subparts C and D of this part, and the terms and conditions contained in the license, is sufficient basis for the revocation of a license or other appropriate enforcement action.

§ 450.205 Financial responsibility requirements.

A licensee must comply with financial responsibility requirements of part 440 of this chapter and as specified in a license or license order.

§ 450.207 Human spaceflight requirements.

A licensee conducting a launch or reentry with a human being on board the vehicle must comply with human spaceflight requirements of part 460 of this chapter as specified in a license or license order.

§ 450.209 Compliance monitoring.

(a) A licensee must allow access by, and cooperate with, Federal officers or employees or other individuals authorized by the FAA to observe any of its activities, or any of its contractors' or subcontractors' activities, associated with the conduct of a licensed launch or reentry.

(b) For each licensed launch or reentry, a licensee must provide the FAA with a console for monitoring the progress of the countdown and communication on all channels of the countdown communications network, unless the licensee has another acceptable means. A licensee must also provide the FAA with the capability to communicate with the mission director designated by § 450.103(a)(1).

§ 450.211 Continuing accuracy of license application; application for modification of license.

(a) A licensee is responsible for the continuing accuracy of representations contained in its application for the entire term of the license.

(b) After a license has been issued, a licensee must apply to the FAA for modification of the license if—

(1) The licensee proposes to conduct a launch or reentry in a manner not authorized by the license; or

(2) Any representation contained in the license application that is material to public health and safety or the safety of property is no longer accurate and complete or does not reflect the licensee's procedures governing the actual conduct of a launch or reentry. A change is material to public health and safety or the safety of property if it alters or affects—

(i) The class of payload;

(ii) The type of launch or reentry vehicle;

(iii) The type or quantity of hazardous material;

(iv) The flight trajectory;

(v) The launch site or reentry site or other landing site; or

(vi) Any system, policy, procedure, requirement, criteria, or standard that is safety critical.

(c) An application to modify a license must be prepared and submitted in accordance with part 413 of this chapter. If requested during the application process, the FAA may approve an alternate method for requesting license modifications. The licensee must indicate any part of its license or license application that would be changed or affected by a proposed modification.

(d) Upon approval of a modification, the FAA issues either a written approval to the licensee or a license order amending the license if a stated term or condition of the license is changed, added, or deleted. An approval has the full force and effect of a license order and is part of the licensing record.

§ 450.213 Pre-flight reporting.

(a) *Reporting method.* A licensee must send the information in this section as an email attachment to *ASTOperations@faa.gov,* or other method as agreed to by the Administrator in the license.

(b) *Mission information.* A licensee must submit to the FAA the following mission-specific information no less than 60 days before each mission conducted under the license, unless the Administrator agrees to a different time frame in accordance with § 404.15 in the license, except when the information was provided in the license application:

(1) Payload information in accordance with § 450.43(i); and

(2) Planned mission information, including the vehicle, launch site, planned flight path, staging and impact locations, each payload delivery point, intended reentry or landing sites including any contingency abort location, and the location of any disposed launch or reentry vehicle stage or component that is deorbited.

(c) *Flight abort and flight safety analysis products.* A licensee must submit to the FAA updated flight abort and flight safety analysis products, using methodologies previously approved by the FAA, for each mission no less than 30 days before flight, unless the Administrator agrees to a different time frame in accordance with § 404.15 in the license.

(1) A licensee is not required to submit the flight abort and flight safety analysis products if—

(i) The analysis submitted in the license application satisfies all the requirements of this section; or

(ii) The licensee demonstrated during the application process that the analysis does not need to be updated to account for mission-specific factors.

(2) If a licensee is required to submit the flight abort and flight safety analysis products, the licensee—

(i) Must account for vehicle- and mission-specific input data;

(ii) Must account for potential variations in input data that may affect any analysis product within the final 30 days before flight;

(iii) Must submit the analysis products using the same format and organization used in its license application; and

(iv) May not change an analysis product within the final 30 days before flight unless the licensee has a process, approved in the license, for making a change in that period as part of the licensee's flight safety analysis process.

(d) *Flight safety system test data.* Any licensee that is required by § 450.101(c) to use a flight safety system to protect public safety must submit to the FAA, or provide the FAA access to, any test reports, in accordance with approved flight safety system test plans, no less than 30 days before flight, unless the Administrator agrees to a different time frame in accordance with § 404.15 in the license. These reports must include:

(1) A summary of the system, subsystem, and component-level test results, including all test failures and corrective actions implemented;

(2) A summary of test results demonstrating sufficient margin to predicted operating environments;

(3) A comparison matrix of the actual qualification and acceptance test levels used for each component in each test compared against the predicted flight levels for each environment, including any test tolerances allowed for each test; and

(4) A clear identification of any components qualified by similarity analysis or a combination of analysis and test.

(e) *Collision avoidance analysis.* A licensee must submit to a Federal entity identified by the FAA and to the FAA the collision avoidance information in appendix A to part 450 in accordance with § 450.169(f).

(f) *Launch or reentry schedule.* A licensee must file a launch or reentry schedule that identifies each review, rehearsal, and safety-critical operation. The schedule must be filed and updated in time to allow FAA personnel to participate in the reviews, rehearsals, and safety-critical operations.

§ 450.215 Post-flight reporting.

(a) A licensee must submit to the FAA the information in paragraph (b) of this section no later than 90 days after a launch or reentry, unless the Administrator agrees to a different time frame in accordance with § 404.15 of this chapter.

(b) A licensee must send the following information as an email attachment to *ASTOperations@faa.gov,* or other method as agreed to by the Administrator in the license:

(1) Any anomaly that occurred during countdown or flight that is material to public health and safety and the safety of property;

(2) Any corrective action implemented or to be implemented after the flight due to an anomaly or mishap;

(3) The number of humans on board the vehicle;

(4) The actual trajectory flown by the vehicle, if requested by the FAA; and

(5) For an unguided suborbital launch vehicle, the actual impact location of all impacting stages and impacting components, if requested by the FAA.

§ 450.217 Registration of space objects.

(a) To assist the U.S. Government in implementing Article IV of the 1975 Convention on Registration of Objects Launched into Outer Space, each licensee must submit to the FAA the information required by paragraph (b) of this section for all objects placed in space by a licensed launch, including a launch vehicle and any components, except any object owned and registered by the U.S. Government.

(b) For each object that must be registered in accordance with this section, no later than 30 days following the conduct of a licensed launch, a licensee must file the following information:

(1) The international designator of the space object;

(2) Date and location of launch;

(3) General function of the space object;

(4) Final orbital parameters, including:

(i) Nodal period;

(ii) Inclination;

(iii) Apogee;

(iv) Perigee; and

(5) Ownership, and country of ownership, of the space object.

(c) A licensee must notify the FAA when it removes an object that it has previously placed in space.

§ 450.219 Records.

(a) Except as specified in paragraph (b) of this section, a licensee must maintain for 3 years all records, data, and other material necessary to verify that a launch or reentry is conducted in accordance with representations contained in the licensee's application, the requirements of subparts C and D of this part, and the terms and conditions contained in the license.

(b) For an event that meets any of paragraph (1) through (5) or paragraph (8) of the definition of ''mishap'' in § 401.7 of this chapter, a licensee must preserve all records related to the event. Records must be retained until completion of any Federal investigation and the FAA advises the licensee that the records need not be retained. The licensee must make all records required to be maintained under the regulations available to Federal officials for inspection and copying.

Appendix A to Part 450—Collision Analysis Worksheet

(a) *Launch or reentry information.* An operator must file the following information:

(1) *Mission name.* A mnemonic given to the launch vehicle/payload combination identifying the launch mission distinctly from all others;

(2) *Launch location.* Launch site location in latitude and longitude;

(3) *Launch or reentry window.* The launch or reentry window opening and closing times in Greenwich Mean Time (referred to as ZULU time) and the Julian dates for each scheduled launch or reentry attempts including primary and secondary launch or reentry dates;

(4) *Epoch.* The epoch time, in Greenwich Mean Time (GMT), of the expected launch vehicle liftoff time;

(5) *Segment number.* A segment is defined as a launch vehicle stage or payload after the thrusting portion of its flight has ended. This includes the jettison or deployment of any stage or payload. For each segment, an operator must determine the orbital parameters;

(6) *Orbital parameters.* An operator must identify the orbital parameters for all objects achieving orbit including the parameters for each segment after thrust ends;

(7) *Orbiting objects to evaluate.* An operator must identify all orbiting object descriptions including object name, length, width, depth, diameter, and mass;

(8) *Time of powered flight and sequence of events.* The elapsed time in hours, minutes, and seconds, from liftoff to passivation or disposal. The input data must include the time of powered flight for each stage or jettisoned component measured from liftoff; and

(9) *Point of contact.* The person or office within an operator's organization that collects, analyzes, and distributes collision avoidance analysis results.

(b) *Collision avoidance analysis results transmission medium.* An operator must identify the transmission medium, such as voice or email, for receiving results.

(c) *Deliverable schedule/need dates.* An operator must identify the times before flight, referred to as ''L-times,'' for which the operator requests a collision avoidance analysis. The final collision avoidance analysis must be used to establish flight commit criteria for a launch.

(d) *Trajectory files.* Individual position and velocity trajectory files, including:

(1) The position coordinates in the Earth-Fixed Greenwich (EFG) coordinates system measured in kilometers and the EFG velocity components measured in kilometers per second, of each launch vehicle stage or payload starting below 150 km through screening time frame;

(2) Radar cross section values for each individual file;

(3) Position Covariance, if probability of impact analysis option is desired; and

(4) Separate trajectory files identified by valid window time frames, if launch or reentry trajectory changes during launch or reentry window.

(e) *Screening.* An operator must select spherical, ellipsoidal, or collision probability screening as defined in this paragraph for determining any conjunction:

(1) *Spherical screening.* Spherical screening centers a sphere on each orbiting object's center-of-mass to determine any conjunction;

(2) *Ellipsoidal screening.* Ellipsoidal screening utilizes an impact exclusion ellipsoid of revolution centered on the orbiting object's center-of-mass to determine any conjunction. An operator must provide input in the UVW coordinate system in kilometers. The operator must provide delta-U measured in the radial-track direction, delta-V measured in the in-track direction, and delta-W measured in the cross-track direction; or

(3) *Probability of Collision.* Collision probability is calculated using position and velocity information with covariance in position.

PART 460—HUMAN SPACE FLIGHT REQUIREMENTS

■ 71. The authority citation for part 460 continues to read as follows:

Authority: 51 U.S.C. 50901–50923.

■ 72. Amend § 460.45 by revising paragraph (d) to read as follows:

§ 460.45 Operator informing space flight participant of risk.

* * * * *

(d) An operator must describe the safety record of its vehicle to each space flight participant as follows:

(1) For licenses issued under part 450 of this chapter, the operator's safety record must cover any event that meets any of paragraph (1), (4), (5), or (8) of the definition of ''mishap'' in § 401.7 that occurred during and after vehicle verification performed in accordance with § 460.17, and include:

(i) The number of vehicle flights;

(ii) The number of events that meet any of paragraph (1), (4), (5), or (8) of the definition of ''mishap'' in § 401.7 of this chapter; and

(iii) Whether any corrective actions were taken to resolve these mishaps.

(2) For licenses issued under part 415, 431, or 435 of this chapter, the operator's safety record must cover launch and reentry accidents and human space flight incidents as defined by § 401.5, that occurred during and after vehicle verification performed in accordance with § 460.17, and include:

(i) The number of vehicle flights;

(ii) The number of accidents and human space flight incidents as defined by § 401.5; and

(iii) Whether any corrective actions were taken to resolve these accidents and human spaceflight incidents.

* * * * *

■ 73. Effective March 10, 2026, further amend § 460.45 by revising paragraph (d) to read as follows:

§ 460.45 Operator informing space flight participant of risk.

* * * * *

(d) An operator must describe the safety record of its vehicle to each space flight participant. The operator's safety record must cover any event that meets any of paragraph (1), (4), (5), or (8) of the definition of ''mishap'' in § 401.7 that occurred during and after vehicle verification performed in accordance with § 460.17, and include:

(1) The number of vehicle flights;

(2) The number of events that meet any of paragraph (1), (4), (5), or (8) of the definition of ''mishap'' in section § 401.7; and

(3) Whether any corrective actions were taken to resolve these mishaps.

* * * * *

Issued under authority provided by 49 U.S.C. 106(f) and 51 U.S.C. Chapter 509 in Washington, DC, on September 30, 2020.

Steve Dickson,

Administrator.

[FR Doc. 2020–22042 Filed 12–2–20; 4:15 pm]

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Part III

Department of Transportation

14 CFR Part 382

Traveling by Air With Service Animals; Final Rule

DEPARTMENT OF TRANSPORTATION

Office of the Secretary

14 CFR Part 382

[Docket No. DOT–OST–2018–0068]

RIN No. 2105–AE63

Traveling by Air With Service Animals

AGENCY: Office of the Secretary (OST), U.S. Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The U.S. Department of Transportation (Department or DOT) is issuing a final rule to amend the Department's Air Carrier Access Act (ACAA) regulation on the transport of service animals by air. This final rule is intended to ensure that our air transportation system is safe for the traveling public and accessible to individuals with disabilities.

DATES: This rule is effective January 11, 2021.

FOR FURTHER INFORMATION CONTACT: Maegan Johnson, Senior Trial Attorney, Office of Aviation Consumer Protection, U.S. Department of Transportation, 1200 New Jersey Ave. SE, Washington, DC, 20590, 202–366–9342, 202–366–7152 (fax), *maegan.johnson@dot.gov* (email). You may also contact Blane Workie, Assistant General Counsel, Office of Aviation Consumer Protection, Department of Transportation, 1200 New Jersey Ave. SE, Washington, DC, 20590, 202–366–9342, 202–366–7152 (fax), *blane.workie@dot.gov.*

SUPPLEMENTARY INFORMATION:

Executive Summary

This final rule defines a service animal as a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability.[1] It allows airlines to recognize emotional support animals as pets, rather than service animals, and permits airlines to limit the number of service animals that one passenger can bring onboard an aircraft to two service animals.

The final rule also allows airlines to require passengers with a disability traveling with a service animal to complete and submit to the airline a form, developed by DOT, attesting to the animal's training and good behavior, and certifying the animal's good health. For flight segments of eight hours or more, the rule allows airlines to require passengers to complete and submit a DOT form attesting that the animal has the ability either not to relieve itself on a long flight or to relieve itself in a sanitary manner. In addition, this final rule allows airlines to require a service animal user to provide these forms up to 48 hours in advance of the date of travel if the passenger's reservation was made prior to that time. As an alternative, airlines may require a passenger with a disability seeking to travel with a service animal in the cabin to provide the forms at the passenger's departure gate on the date of travel. However, the final rule prohibits airlines from requiring that a passenger physically check-in at the airport solely on the basis that the individual is traveling with a service animal, thus ensuring that service animal users are not prevented from enjoying the same convenience-related benefits provided to other passengers, such as online and curbside check-in. Service animal users may use the online check-in process available to the general public.

This final rule also better ensures the safety of passengers and crewmembers by allowing carriers to require that service animals are harnessed, leashed, or otherwise tethered onboard an aircraft and includes requirements that would address the safe transport of large service animals in the aircraft cabin. Further, it specifies the circumstances under which the user of a service animal may be charged for damage caused by the service animal and addresses the responsibilities of code-share partners.

1. Statutory Authority

The Air Carrier Access Act (ACAA), 49 U.S.C. 41705, prohibits discrimination in airline service based on disability. When enacted in 1986, the ACAA applied only to U.S. air carriers. On April 5, 2000, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR–21) amended the ACAA to include foreign carriers. The ACAA, while prohibiting discrimination by U.S. and foreign air carriers in air transportation against qualified individuals with disabilities, does not specify how carriers must act to avoid such discrimination. The statute similarly does not specify how the Department should regulate with respect to these issues. In addition to the ACAA, the Department's authority to regulate nondiscrimination in airline service on the basis of disability is based in the Department's rulemaking authority under 49 U.S.C. 40113, which states that the Department may take action that it considers necessary to carry out this part, including prescribing regulations.

The current rulemaking has presented questions about how the ACAA is reasonably interpreted and applied to require airlines to accommodate the needs of individual passengers whose physical or mental disability necessitates the assistance of a service animal in air transportation. In approaching these questions, the Department recognizes that the ACAA's nondiscrimination mandate is not absolute. The statute requires airlines to provide accommodations that are reasonable given the realities and limitations of air service and the onboard environment of commercial airplanes. Animals on aircraft may pose a risk to the safety, health, and well-being of passengers and crew, and may disturb the safe and efficient operation of the aircraft. Any requirement for the accommodation of passengers traveling with service animals onboard aircraft necessarily must be balanced against the health, safety, and mental and physical well-being of the other passengers and crew, and must not interfere with the safe and efficient operation of the aircraft.

2. Purpose of Regulatory Action

The purpose of this final rule is to revise the Department's Air Carrier Access Act (ACAA) regulation on traveling by air with service animals (formerly 14 CFR 382.117) in 14 CFR part 382.[2] This final rule is prompted by a number of compelling needs to revise these regulations: (1) The increasing number of service animal complaints received from, and on behalf of, passengers with disabilities by the Department and by airlines; (2) the

[1] The Department's ACAA definition of a service animal in this final rule is similar to the definition of a service animal in the Department of Justice (DOJ) regulations implementing the Americans with Disabilities Act (ADA), 28 CFR 35.104 and 28 CFR 36.104. Although DOT has chosen to closely align its ACAA service animal definition with DOJ's service animal definition under the ADA, the substantive requirements in this final rule differ from DOJ's requirements for service animals under the ADA in various areas, *e.g.,* allowing airlines to require service animal documentation and prohibiting the use of voice control over a service animal.

[2] In 2008, the Department amended 14 CFR 382 by adding 14 CFR 382.117, a provision dedicated to the transport of service animals on aircraft. The Department's 2008 amendment codified prior DOT guidance, which allowed airlines to require emotional support animal and psychiatric service animal users to provide a letter from a licensed mental health professional of the passenger's need for the animal, and permitted airlines to require 48 hours' advance notice of a passenger's wish to travel with an emotional support or psychiatric service animal to give airlines sufficient time to assess the passenger's documentation. This final rule removes 14 CFR 382.117 and adds a new subpart, Subpart EE, on service animals.

inconsistent definitions among Federal agencies of what constitutes a ''service animal;'' (3) the disruptions caused by requests to transport unusual species of animals onboard aircraft, which has eroded the public trust in legitimate service animals; (4) the increasing frequency of incidents of travelers fraudulently representing their pets as service animals; and (5) the reported increase in the incidents of misbehavior by emotional support animals. In addition, DOT has received multiple requests for the Department to regulate in this area.[3] Each of these purposes underlying this rulemaking, as well as the requests for rulemaking, were discussed in depth in the Department's notice of proposed rulemaking (NPRM) issued on February 5, 2020.[4] Please refer to that discussion for additional background.

This final rule also responds to a congressional mandate. The FAA Reauthorization Act of 2018 (the FAA Act) requires the Department to conduct a rulemaking proceeding on the definition of the term ''service animal'' and to develop minimum standards for what is required for service and emotional support animals.[5] Congress also required the Department to consider whether it should align DOT's ACAA definition of a service animal with the service animal definition established by the U.S. Department of Justice (DOJ) in its rule implementing the Americans with Disabilities Act (ADA).[6] In response, and as described in more detail below, the Department has chosen to revise its service animal definition under the ACAA to be more closely aligned with DOJ's service animal definition under the ADA, although the substantive requirements in DOT's ACAA service animals rule differ from DOJ's requirements for service animals under the ADA in a number of respects. This final rule is responsive to, and fulfills the requirements found in, the FAA Act.

3. Recent Rulemaking Activities

On May 23, 2018, the Department published in the **Federal Register** an Advance Notice of Proposed Rulemaking (ANPRM) titled ''Traveling by Air with Service Animals.''[7] In the ANPRM, the Department sought comment on how to amend the Department's ACAA regulations to address concerns raised by individuals with disabilities, airlines, flight attendants, airports and other aviation stakeholders regarding service animals on aircraft. On February 5, 2020, a Notice of Proposed Rulemaking (NPRM) on Traveling by Air with Service Animals was published in the **Federal Register**.[8] The Department sought in the NPRM to propose a rule that would ensure passengers with disabilities can continue traveling with service animals in air transportation while also reducing the likelihood that there would be safety or health issues at the airport or onboard aircraft.

The Department received approximately 15,000 comments on the NPRM.[9] While most of the comments received in response to the NPRM were from individual commenters, the Department also received many comments from disability rights advocacy organizations, airlines, airports, transportation worker associations, animal health and training organizations, and a number of other special-interest organizations. The Department has carefully reviewed and considered all of the comments received and is issuing this final rule to ensure access to individuals whose physical or mental disability necessitates the assistance of a service animal in air transportation, while also considering the realities, risks, and limitations associated with transporting animals on aircraft.

4. Summary of the Major Provisions

Subject	Final rule
Definition of Service Animal	A service animal is as a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability.
Emotional Support Animals	Carriers are not required to recognize emotional support animals as service animals and may treat them as pets.
Treatment of Psychiatric Service Animals.	Psychiatric service animals are treated the same as other service animals that are individually trained to do work or perform a task for the benefit of a qualified individual with a disability.
Species	Carriers are permitted to limit service animals to dogs.
Health, Behavior and Training Form	Carriers are permitted to require passengers to remit a completed hardcopy or electronic version of the Department's ''U.S. Department of Transportation Service Animal Air Transportation Form'' as a condition of transportation.
Relief Attestation	Carriers are permitted to require individuals traveling with a service animal on flights eight hours or longer to remit a completed hardcopy or electronic version the Department's ''U.S. Department of Transportation Service Animal Relief Attestation'' as a condition of transportation.
Number of Service Animals per Passenger.	Carriers are permitted to limit the number of service animals traveling with a single passenger with a disability to two service animals.
Large Service Animals	Carriers are permitted to require a service animal to fit on their handler's lap or within its handler's foot space on the aircraft.
Control of Service Animals	Carriers are permitted to require a service animal to be harnessed, leashed, or otherwise tethered in areas of the airport that they own, lease, or control, and on the aircraft.
Service Animal Breed or Type	Carriers are prohibited from refusing to transport a service animal based solely on breed or generalized physical type, as distinct from an individualized assessment of the animal's behavior and health.

[3] *See, e.g.,* Psychiatric Service Dog Society, DOT–OST–2009–0093–0001, 1–2, at *https://www.regulations.gov/document?D=DOT-OST-2009-0093-0001* (Apr. 21, 2009); Comment from Airlines for America at *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2751* (Dec. 4, 2017); Comment from International Air Transport Association at *https://www.regulations.gov/document?D=DOT-OST-2017-0069-269* (Dec. 1, 2017); Comment from Kuwait Airways at *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2679* (Dec. 1, 2017); and Comment from National Air Carrier Association at *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2771* (Dec. 4, 2017).

[4] *See* U.S. Department of Transportation, Notice of Proposed Rulemaking, ''Traveling by Air with Service Animals,'' 85 FR 6448 (Feb. 5, 2020).

[5] The FAA Reauthorization Act of 2018, Public Law 115–254, Sec. 437 (Oct. 5, 2018).

[6] *See* DOJ's ADA definition of a service animal in 28 CFR 35.104 and 28 CFR 36.104.

[7] Traveling by Air with Service Animals, Advance Notice of Proposed Rulemaking, 83 FR 23832 (May 23, 2018).

[8] Traveling by Air with Service Animals, Notice of Proposed Rulemaking, 85 FR 6448 (Feb. 5, 2020).

[9] *See https://www.regulations.gov/docket?D=DOT-OST-2018-0068.*

Subject	Final rule
Check-In Requirements	Carriers are not permitted to require a passenger with a disability to physically check-in at the airport, rather than using the online check-in process, on the basis that the individual is traveling with a service animal. Airlines may require a passenger with a disability seeking to travel with a service animal to provide the service animal form(s) at the passenger's departure gate on the date of travel.
Advance Notice Requirements	Carriers may require individuals traveling with a service animal to provide a U.S. Department of Transportation Service Animal Air Transportation Form and, if applicable, a U.S. Department of Transportation Service Animal Relief Attestation up to 48 hours in advance of the date of travel if the passenger's reservation was made prior to that time.

5. Summary of the Economic Analysis

The Department has prepared a regulatory evaluation in support of the final rule to amend the ACAA service animal regulations. Under this final rule, a service animal is limited to a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability. It allows airlines, for the first time, to recognize emotional support animals (ESAs) as pets rather than service animals. Because airlines charge passengers for transporting pets, and are prohibited from charging passengers traveling with service animals, passengers previously had an incentive to claim their pets were ESAs. Airlines and other passengers have also reported increased incidence of misbehavior by ESAs on aircraft and in the airport. The misbehavior has included animals' urinating, defecating, and in some instances, harming people and other animals at the airport or on the aircraft. The primary economic impact of this rule is that it will eliminate a market inefficiency. Treating ESAs as service animals amounts to a price restriction that sets the price of accommodating passengers who travel with ESAs at zero dollars, despite the fact that airlines face non-zero resource costs to accommodate those passengers.

Table ES–1 summarizes the results of the regulatory evaluation. The final rule creates a potential burden on passengers who travel with service animals as it allows airlines to require such passengers to submit two U.S. DOT forms. We estimate that the forms could create as much as 74,000 burden hours and $1.1 million in costs per year in 2018 dollars.

Evaluating other impacts was more difficult due to data limitations. To gauge the potential magnitude of these impacts, we combined the limited data with reasonable assumptions about ESA transport that could occur under the final rule and a demand elasticity from a surrogate market. The analysis indicates that the final rule could be expected to generate annual cost savings to airlines between $15.6 million and $21.6 million and annual net benefits of $3.9 to $12.7 million.

TABLE ES–1—SUMMARY OF ECONOMIC IMPACTS DUE TO FINAL RULE

[2018 Dollars, millions]

Impact	Annual value
Costs:	
Paperwork burden for passengers traveling with service animals	$1.1.
Cost savings to airlines associated with providing ESA travel	−$21.6 to −$15.6.
Benefits:	
Lost benefits to individuals who no longer travel with ESAs	−$10.6 to −$7.8.
Reduction in negative externalities caused by ESAs	Not quantified.
Transfers:	
Increased fees paid by passengers travelling with ESAs to airlines	$54.0 to $59.6.
Net benefits (benefits minus costs)	$3.9 to $12.7.

Discussion

1. Definition of a Service Animal

In developing the definition of a service animal, the Department carefully considered whether emotional support animals should be treated as service animals, whether psychiatric service animals should be treated the same as other service animals, whether to limit service animals to certain species of animals, whether certain breeds or generalized physical types of animals should not be considered service animals, and whether the Department's definition of a service animal under the ACAA should be similar to the DOJ definition of a service animal under the ADA. Each of these issues is discussed in turn below.

A. Emotional Support Animals

The NPRM

In the NPRM, the Department explained that the ACAA regulations currently recognize two types of service animal: (1) Any animal that is individually trained or able to provide assistance to a qualified person with a disability; and (2) emotional support animals, defined as ''any animal shown by documentation to be necessary for the emotional well-being of a passenger.'' Emotional support animals are intended to mitigate a passenger's disability by their presence, and are expected to be trained to behave in public, but are not individually trained to do work or perform tasks for the benefit of a passenger with a disability.

In the NPRM, the Department proposed to allow airlines to treat emotional support animals as pets, rather than service animals. The Department proposed to do so by redefining a ''service animal'' as a dog that is individually trained to do work or perform a task for the benefit of a qualified individual with a disability. Under the Department's proposed definition, airlines would not be required to recognize comfort animals, companionship animals, or any other non-task-trained animals as service animals. The Department indicated that the proposal was intended to align the definition of a service animal under the ACAA with the DOJ's definition of a

service animal under the ADA.[10] One purpose of this alignment was to reduce confusion for individuals with disabilities, airline personnel, and airports (which are generally subject to the ADA rather than the ACAA).

In the NPRM, the Department sought comment on how its proposed service animal definition would impact individuals with disabilities who rely on emotional support animals when traveling on aircraft. Furthermore, although airlines could choose to continue to recognize emotional support animals and transport them for free pursuant to an airline's established policy, the Department specifically sought comment on whether individuals with disabilities who use emotional support animals to mitigate their disabilities would be less likely to travel by air if they were no longer permitted to travel with their emotional support animals. In addition, since the Department proposed that airlines would be permitted to treat emotional support animals as pets, the Department sought comment on whether individuals would be able to transport emotional support cats or other small animals as pets in the cabin for a fee, and whether the limits on the number of pets an airline would allow per flight could impact their transport.

The Department also requested comment in the NPRM on whether emotional support animal users could train their animals to do work or perform tasks to assist them with their disability, thereby transforming the animal from an emotional support animal to a psychiatric service animal.

Although the Department proposed not to treat emotional support animals as service animals, the Department also sought comment on whether it should recognize emotional support animals as a separate and distinct accommodation for passengers with disabilities. Specifically, the Department sought comment on whether to allow airlines to mandate stricter medical documentation requirements for individuals traveling with emotional support animals; whether airlines should be allowed to require that emotional support animals be contained in an FAA-approved in-cabin pet carrier in the airport and on the aircraft; and whether limiting emotional support animals to one per passenger would mitigate a passenger's disability sufficiently on a flight or at the passenger's destination. The Department did so as part of the mandate in the FAA Act, which required the Department to conduct a rulemaking proceeding on the definition of the term ''service animal,'' and to develop minimum standards for what is required for service and emotional support animals.[11]

Comments Received

Of the approximately 15,000 comments in response to the NPRM, more than 10,000 of those comments concerned the transport of emotional support animals. More than 3,000 individuals submitted comments in support of DOT's proposal to exclude emotional support animals from the ACAA definition of a service animal and to allow airlines to treat emotional support animals as pets. Furthermore, a large majority of airline industry stakeholder organizations that submitted comments on this issue (*i.e.,* airlines and airline organizations, airports, flight attendants, and other transportation worker organizations), expressed their support for DOT's proposal to allow airlines to treat emotional support animals as pets. Furthermore, approximately half of the disability rights advocacy organizations that submitted comments on this issue (mainly those organizations that represent individuals with allergies and individuals with visual impairment who use guide dogs) also supported DOT's proposal to allow airlines to treat emotional support animals as pets.

Supporters of DOT's proposal to exclude emotional support animals from the service animal definition primarily expressed safety concerns. They described incidents of misbehavior by emotional support animals, including acting aggressively toward people and other service animals by biting, growling, and lunging; and urinating, defecating, and otherwise failing to be under the control of their handler. Commenters expressed general safety concerns for travelers and airline crew given these disturbances. Some commenters expressed the view that many emotional support animal users may not actually be individuals with disabilities, but instead are individuals who are misrepresenting their pets as service animals to avoid paying airline pet fees.

Airlines for America (A4A), the Regional Airline Association, and the National Air Carrier Association jointly commented[12] that numerous incidents on aircraft have demonstrated that emotional support animals are substantially more likely to misbehave during a flight due to the stressful and challenging aircraft environment.[13] These organizations emphasized that emotional support animal misbehavior poses a substantial risk to flight safety, and that aircraft cannot reasonably carry untrained animals in the cabin that are uncontained. Similarly, the Association of Professional Flight Attendants (APFA) commented that ''emotional support animals have been known to bite passengers and Flight Attendants, urinate, defecate, cause allergic reactions and encroach on the space and comfort zone of other passengers who have purchased tickets,'' and that an untrained emotional support animal can put passengers at risk during an emergency evacuation.[14] The California Chapter of the American Council of the Blind (ACB California) also commented that emotional support animals pose a risk to people and other service animals as its members have reported that their guide dogs have been barked at and growled at on many occasions.[15] Similarly, the American Veterinary Medical Association (AVMA) commented that untrained emotional support animals ''are often not acclimated to various stressful situations in the same manner that service animals are trained,'' which ''puts the safety and well-being of both the animal and those sharing the animal's space at risk.''[16]

The second concern most frequently expressed by commenters in support of DOT's proposal related to those individuals who misrepresent their pets as service animals, and the growing number of online mental health professionals willing to provide pet owners with emotional support animal and psychiatric service animal documentation for a fee. American Airlines commented that the ''increase in the availability of fraudulent ESA credentials has enabled people who are not truly in need of animal assistance to abuse the rules and evade airline policies regarding animals in the

[10] *See* DOJ's ADA definition of a service animal at 28 CFR 35.104 and 28 CFR 36.104.

[11] FAA Reauthorization Act of 2018, Public Law 115–254, Sec. 437 (Oct. 5, 2018).

[12] For ease of reference we will refer to these organizations collectively as ''A4A.''

[13] Comment from Airlines for America (A4A), the Regional Airline Association, (RAA), and the National Air Carrier Association (NACA) (collectively referred to as A4A) at *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[14] Comment from Association of Professional Flight Attendants (APFA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19238.*

[15] Comment from California Chapter of the American Council of the Blind (ACB California), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19145.*

[16] Comment from American Veterinary Medical Association (AVMA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19283.*

cabin.'' [17] Similarly, Open Doors Organization commented that airlines can show evidence of letters written by certain mental health professionals on the web that result from fee-based online evaluations or consultations with minimal therapeutic interaction between the health professional and the traveler.[18] Likewise, the Association of Late Deafened Adults commented that people who falsely claim their pets are service animals can purchase a fake service animal vest for their pet online without the pet going through any period of training.[19]

Some commenters also support DOT's proposed service animal definition, limiting service animals to task-trained animals, because they believe that only service animals trained to do work or perform tasks for the benefit of a person with a disability can effectively function as service animals. The American Association of Airport Executives (AAAE) commented that disability mitigation training, which enables an animal to know how to guide individuals with vision impairments, retrieve items for individuals with mobility impairments, and perform other tasks and functions for individuals with disabilities, is critical to mitigating potential risks and to ensure safety of passengers in the terminal.[20] An individual commenter remarked that ''a critical part of a service animal's training includes a systematic socialization process that gradually and humanely exposes the dog to a variety of public places and settings . . . [which] ensures that service animals can both reliably perform their essential duties in all types of settings, and that venues like busy airport and crowded aircraft cabins will not trigger behaviors that are unsafe for the disabled handler, or for others to be around.'' [21]

The Department also received a significant number of comments from individuals suffering from allergies, or individuals and organizations commenting on behalf of allergy sufferers, in support of the proposal to allow airlines to treat emotional support animals as pets. These commenters describe how the recent increases in the number of service animals on aircraft, ostensibly emotional support animals, has created an untenable environment for allergy sufferers in the aircraft cabin. Furthermore, these commenters believe that DOT's proposed rule would result in an overall decrease in the number of service animals on aircraft, which would improve the level of unwanted fur-related allergens on aircraft. The Asthma and Allergy Network commented that a training requirement for service animals would help mitigate the number of animals on aircraft.[22] The Asthma Allergy Foundation of America also commented that it supports DOT's proposal, which permits airlines the flexibility to treat emotional support animals as pets, because it will ''reduce the risk of animals triggering asthma attacks or severe allergic reactions.'' [23]

On the other hand, more than 6,000 commenters either supported the Department's continued recognition of emotional support animals as service animals, or supported a rule allowing emotional support animals to be recognized as a separate accommodation for individuals with disabilities. The individual commenters who support the Department's continued recognition of emotional support animals as service animals include individuals who suffer from autism, debilitating depression, anxiety, post-traumatic stress disorder, and a range of other mental and emotional disabilities. One individual commenter indicated that she believed that DOT's proposal is discriminatory toward veterans with disabilities and those with mental health problems, stating: ''ESAs like mine are prescribed by [a] healthcare professional in order to ease stress, anxiety, depression and PTSD. I have PTSD and anxiety and I will testify to the benefit of my ESA. It is far better than dangerous and harmful drugs that I would otherwise need to take.'' [24]

Other individual commenters described their disabilities and how they are able to travel and, in some cases, complete everyday functions because of the presence of their emotional support animals. Some of these commenters described how certain individuals with disabilities would no longer be able to fly if the Department passed its proposed definition of a service animal, since many individuals suffering from mental and emotional disabilities have low incomes and can barely afford the cost of their own ticket for air transportation. For example, a joint comment from Paralyzed Veterans for America (PVA) and other advocacy organizations noted that even if a passenger's emotional support animal is able to travel as a pet, these fees can cost upwards of $175 each way, and that ''people with disabilities are disproportionately low income and these fees would likely make it very difficult for emotional support animals users to travel[.]'' [25] Several individual commenters also described the inconceivability of leaving their emotional support animals behind, as many are either unable to fly without their emotional support animal, or unable to function without their emotional support animal at their destination for long periods of time.

The Department also received comments from licensed mental health professionals and other health care workers who describe the harmful impact that DOT's rule would have on individuals who suffer from mental and emotional disabilities. These commenters describe their patients, many of whom were prescribed an emotional support animal to help accommodate a serious mental or emotional disability, and how the Department's proposed rule appears to have a disproportionately negative impact on individuals with mental disabilities, in comparison to those with physical disabilities.

Half of disability rights advocacy organizations that commented on the NPRM opposed the Department's proposal to treat emotional support animals as pets. They argue primarily that emotional support animals provide a vital accommodation for many individuals suffering from a wide range of serious mental and emotional disabilities. The Autistic Self Advocacy Network commented that emotional support animals ''can assist with sensory regulation, anxiety, and provide focus for social communication'' and without the calming effect of an emotional support animal, individuals with autism or other mental disabilities

[17] Comment from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.*

[18] Comment from Open Doors Organization, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305. https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305.*

[19] Comment from Association of Late Deafened Adults, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17669.*

[20] Comment from American Association of Airport Executives, (AAAE), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19196.*

[21] Comment from Ginger G.B. Kutsch, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19306.*

[22] Comment from the Allergy and Asthma Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17955.*

[23] Comment from the Asthma and Allergy Foundation of America, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18498.*

[24] Comment from Gabrielle Ruiz, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19304.*

[25] Joint Comment from PVA, Access Living of Metropolitan Chicago, American Association of People with Disabilities, Bazelon Center for Mental Health Law, Christopher and Dana Reeve Foundation, the National Council on Independent Living, National Disability Rights Network, and the National Multiple Sclerosis Society, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.* For ease of reference we will refer to these organizations collectively as ''PVA.''

may be unable to function without the assistance of an ESA for several days or weeks, which may result in their inability to travel.[26] The Disability Rights Education Defense Fund (DREDF) similarly commented that the ''use of an emotional support animal may be the only option for effective mitigation of their mental health symptoms'' because for some individuals with psychiatric disabilities, ''medications are ineffective and few or no other clinical mental health interventions are available or successful for them.'' [27] The DREDF further commented that ''[f]requently, an emotional support animal is the primary intervention that enables a person with a psychiatric disability to succeed with daily activities—and sometimes to stay alive.'' [28]

Many of the disability rights advocates that supported DOT's continued recognition of emotional support animals either (1) expressed support for stricter requirements on the transport of emotional support animals, or (2) supported DOT recognition of emotional support animals not as service animals, but as a separate accommodation for individuals with disabilities with its own distinct set of regulations. Commenters that favored stricter requirements for service animal users, such as Disability Rights of Florida and PVA, submitted comments in support of a rule that would allow carriers to require behavior attestations from emotional support animal users, although these organizations rejected measures such as the mandatory containment of emotional support animals in pet carriers.[29] Similarly, the Oklahoma Disability Law Center commented that it would also support a rule that allowed carriers to require behavior attestations, as well as a rule that would allow airlines to require emotional support animal users to produce documentation from a licensed mental health professional following an in-person visit.[30]

Organizations that supported a DOT ACAA rule treating emotional support animals as a separate accommodation from service animals, such as PVA, commented that the ''Department should recognize emotional support animals as an accommodation because emotional support animals are different from service animals in that they are not trained to perform work or tasks to mitigate a disability.'' [31] The Humane Society of the United States commented that DOT should adopt a rule that would allow emotional support animals as a separate accommodation known as an ''assistance animal,'' [32] regulated separately from service animals, similar to the Fair Housing Act rule of the Department of Housing and Urban Development (HUD).[33] Opening Doors, PLLC, another interested stakeholder that commented in support of DOT's treating emotional support animals as a separate accommodation, stated that a ''benefit of aligning the definition of 'emotional support animal' with 'assistance animal' is that [the Fair Housing Act (FHA)] already has a framework in place for evaluating reasonable accommodation requests.'' [34]

In response to the Department's request for comment on the feasibility of turning an emotional support animal into a psychiatric service animal, U.S. Support Animals commented that ''requiring a person with an emotional disability to train their emotional support animal to be a psychiatric service dog would be incredibly burdensome on most disabled people and often an impossible standard to meet.'' [35] U.S. Support Animals further commented that ''emotional support animals should not be trained to perform a specific task'' because the benefit of an emotional support animal is the animal's presence; ''there is often no task that can even be defined for the animal to perform that would help alleviate the symptoms that the passenger exhibits.'' [36] In addition, PVA, using rabbits as an example, commented that it ''does not believe that it is possible to convert all emotional support animals into service animals.'' [37]

DOT Response

The Department recognizes that whether to require airlines to recognize emotional support animals as service animals is a contentious question, with strongly held views on all sides, and with no perfect solution likely to satisfy all stakeholders. After careful review of the comments in this area, the Department has determined that the most appropriate course is to adopt a definition of service animal that covers only dogs, regardless of breed or type, that are individually trained to do work or perform tasks for the benefit of a qualified individual with a disability. This definition excludes all non-task-trained animals, such as emotional support animals, comfort animals, and service animals in training.

The Department recognizes several benefits to adopting this definition. First, the rule is expected to reduce confusion among airlines, passengers, airports, and other stakeholders by more closely aligning the Department's definition of a service animal with DOJ's definition of a service animal under the ADA, which applies to a broad array of entities, including airports, and which covers only dogs that are individually trained to do work or perform tasks for the benefit of an individual with a disability. The Department has long recognized that under its prior rule, air transportation was the only mode of transportation on which emotional support animals must be accommodated.[38] Indeed, under the ADA, emotional support animals are not required to be accommodated in public spaces such as restaurants, hotels, theaters, or airports. This mismatch between the Department's ACAA regulation and the DOJ's ADA regulation was particularly striking

[26] Comment from the Autistic Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.*

[27] Comment from the Disability Rights Education Defense Fund (DREDF), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264.*

[28] *Id.*

[29] Comments from Disability Rights Florida, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19336,* and PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[30] Comment from the Oklahoma Disability Law Center, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19237.*

[31] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[32] The U.S. Department of Housing and Urban Development (HUD), which enforces the Fair Housing Act regulations, recognizes two types of assistance animals: (1) Service animals, and (2) other trained or untrained animals that do work, perform tasks, provide assistance, and/or provide therapeutic emotional support for individuals with disabilities (''support animal''). See Service Animals and Assistance Animals for People with Disabilities in Housing and HUD-Funded Programs, FHEO Notice: FHEO–2020–01, *https://www.hud.gov/sites/dfiles/PA/documents/HUDAsstAnimalNC1-28-2020.pdf* (Jan. 28, 2020), and *https://www.hud.gov/sites/dfiles/PA/documents/AsstAnimalsGuidFS1-24-20.pdf.*

[33] Comment from the Humane Society of the United States (Humane Society), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19184.*

[34] Comment from Opening Doors, PLLC, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-7322.*

[35] Comment from U.S. Support Animals, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19248.*

[36] *Id.*

[37] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[38] We acknowledge that emotional support animals are permitted as a reasonable accommodation for a person with a disability under the Fair Housing Act. However, we note that the large space available to the animal and the limited number of other individuals in close proximity to the animal differs significantly when compared to the confined space on an aircraft cabin and the many other passengers in close proximity to the animal on aircraft.

given that passengers in air transportation are confined with service animals in the narrow space of an aircraft cabin for the duration of the flight.

Second, after reviewing the comments submitted during both the ANPRM and NPRM, we find persuasive the view of advocates who commented that task-trained service animals are also generally provided enhanced training in how to behave in public, while emotional support animals may not have received this degree of training. We also find persuasive the information provided by airlines and other stakeholders indicating that emotional support animals, or animals being presented to the airline as emotional support animals, are responsible for a significant percentage of the incidents of animal misbehavior onboard aircraft. Finally, it is reasonable to predict that the Department's definition will result in an overall reduction in the number of uncrated animals onboard aircraft, thereby reducing the overall number of animal misbehavior incidents (and the overall number of potential allergic reactions) onboard aircraft.

For many of these same reasons, we have declined to adopt a process to accommodate emotional support animals onboard, not as service animals, but as a separate accommodation for individuals with disabilities with its own distinct set of requirements, such as stricter documentation standards, containment in a pet carrier, etc. In our view, allowing emotional support animals with a stricter set of requirements would perpetuate tiered systems that give rise to confusion and the continued opportunity for abuse and increased safety risk. As such, the final rule allows airlines to treat emotional support animals as pets. We note, however, that airlines may choose to continue to transport emotional support animals without charge at their discretion. Furthermore, even if airlines decide after the effective date of this rule to charge pet fees for emotional support animals, this change would not impact the ability of individuals with psychiatric or mental health disabilities to continue to travel with their psychiatric service animals onboard aircraft without being charged a pet fee. This rule requires airlines to recognize animals that are individually trained to do work or perform tasks for the benefit of individuals with mental health disabilities as service animals, including psychiatric service animals.

We solicited comment on the specific question whether and at what cost emotional support animals could be task-trained, and could therefore qualify as psychiatric service animals. We received few comments on this issue. PVA, for example, commented that an emotional support rabbit could not be individually trained to perform a task or function, but does provide emotional support for the individual by its presence.[39] U.S. Support Animals stated that ''requiring a person with an emotional disability to train their emotional support animal to be a psychiatric service dog would be incredibly burdensome on most disabled people and often an impossible standard to meet.'' [40] While we understand PVA's concern that there are currently emotional support animals such as rabbits that cannot be trained, the Department's final rule recognizes only dogs as service animals, and it is our understanding that the vast majority of emotional support animals are dogs, and dogs can be task-trained to perform many different tasks and functions. We also note that the rule does not require service animal users to incur the cost of training by third party schools or organizations; service animal users are free to train their own dogs to perform a task or function for them.

B. Psychiatric Service Animals

The NPRM

In the NPRM, the Department proposed to change its service animal requirements to ensure that psychiatric service animals would be treated the same as other service animals. Psychiatric service animals are individually trained to do work or perform tasks for an individual with a psychiatric, intellectual, or other mental disability. In the NPRM, the Department proposed to remove requirements for psychiatric service animal users that allowed airlines (1) to require psychiatric service animal users to provide a letter from a licensed mental health professional of the passenger's need for the animal,[41] (2) to require 48 hours' advance notice of a passenger's intent to travel with a psychiatric service animal to give airlines sufficient time to assess the passenger's documentation, [42] and (3) to require check in one hour before the check-in time for other passengers. The Department's proposed definition of a service animal sought to ensure that individuals with mental and psychiatric disabilities who rely on psychiatric service animals would be treated the same as individuals with physical disabilities who rely on task-trained service animals. The Department's proposal was based on the fact that there is no valid basis for allowing airlines to treat certain tasked-trained service animals differently from other task-trained animals.

In the NPRM, the Department indicated that it was aware of concerns about passengers who falsely claim to have a mental health condition that may require the use of a service animal. We recognized that it was this specific concern that originally led the Department to adopt heightened documentation and check-in requirements for users of both emotional support animals and psychiatric service animals. We noted in the NPRM, however, that ''unscrupulous passengers may also falsely claim to have other hidden disabilities such as seizure disorder or diabetes to pass off their pets as service animals and avoid paying airline pet fees.'' [43] In other words, the concerns that led the Department to adopt heightened documentation and check-in requirements for users of psychiatric service animals is not unique to psychiatric service animals. For these reasons, the proposed final rule did not draw distinctions between psychiatric service animals and other types of service animals.

In the NPRM, we indicated that if the rule were adopted as proposed, the Department would monitor the experience of airlines in accommodating the use of psychiatric service animals, particularly given the concern that unscrupulous passengers may attempt to pass off their pets as psychiatric service animals. We indicated that we would ''consider revisiting whether it is reasonable and appropriate to allow additional requirements for the use of such animals if there is a demonstrated need—for example, if there is a notable increase in instances of passengers falsely representing pets as mental-health-related service animals.'' [44]

Comments Received

Most individuals, disability rights organizations, airlines, and other stakeholders who commented on these topics supported the elimination of regulatory distinctions between psychiatric service animals and other service animals. Commenters generally observed that the Department's prior

[39] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[40] Comment from, U.S. Support Animals at *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19248.*

[41] 14 CFR 382.117(e).

[42] 14 CFR 382.27(c)(8).

[43] Traveling by Air with Service Animals, Notice of Proposed Rulemaking, 85 FR 6448 (Feb. 5, 2020).

[44] Traveling by Air with Service Animals, Notice of Proposed Rulemaking, 85 FR 6448 (Feb. 5, 2020).

approach unfairly discriminated against individuals with particular types of disabilities. Some commenters also noted that the proposed rule harmonizes DOT's approach with that of other Federal agencies in this respect. In contrast, four airlines (Air Canada, Allegiant Airlines, Asiana Airlines, and Spirit Airlines) and one advocacy organization [45] (the Michigan Developmental Disabilities Council) recommended that the Department retain heightened documentation requirements for psychiatric service animal users because of concerns that individuals who wish to travel with their pets in the cabin for free may start misrepresenting their pets as psychiatric service animals.

With respect to monitoring potential falsification of pets as psychiatric service animals, we received a range of responses. A4A expressed concern that ''the fraud will migrate to the PSA category,'' and urged the Department to explain how it would collect data to monitor the issue.[46] All Nippon Airways (ANA) expressed a similar view.[47] American Kennel Club urged the Department to monitor fraud with respect to psychiatric service animals.[48]

PVA expressed concerns about the Department's stated intent to monitor potential fraud by individuals who attempt to pass off their pets as psychiatric service animals. PVA indicated that ''the Department provides no information about why suspicion should be cast on psychiatric service animal users versus animals that assist passengers with other non-apparent disabilities.'' [49] PVA also noted that without a clear sense of how that monitoring would take place, the public would not know whether any conclusions are based on accurate data.

DOT Response

The Department agrees with commenters who expressed the view that it is inappropriate to allow airlines to impose greater burdens on psychiatric service animal users than on individuals who utilize service animals that are trained to do work or perform tasks for the benefit of individuals with physical or other types of disabilities. Accordingly, the Department will no longer draw a distinction between psychiatric service animal users when traveling in air transportation and other service animal users. This means that psychiatric service animals will be subject to the same regulations as other service animals. Most notably, psychiatric service animal users will no longer be required to provide a letter from a licensed mental health professional detailing the passenger's need for the animal, nor will they be required to check in one hour before the check-in time for other passengers.

The Department will, however, monitor whether unscrupulous individuals are attempting to pass off their pets as service animals for non-apparent disabilities, including (but not limited to) psychiatric disabilities. This process is not intended to single out or unduly burden psychiatric service animal users. Indeed, in the NPRM, the Department noted the possibility that individuals could also attempt to pass off their pets as service animals for non-apparent physical disabilities, such as diabetes. The Office of Aviation Consumer Protection welcomes the input and assistance of airlines, disability advocacy organizations, and other stakeholders on how best to conduct the monitoring to ensure accurate data.

C. Species

The NPRM

In the NPRM, the Department proposed to limit the species of animals that airlines would be required to recognize as service animals to dogs. Under the Department's proposal, while airlines could choose to transport other species of animals that assist individuals with disabilities in the cabin for free pursuant to an established airline policy, they would only be required under Federal law to recognize dogs as service animals. The Department's proposal considered the fact that dogs are the most common animal species used to assist individuals with their disabilities, both on and off aircraft, and that dogs have both the temperament and ability to do work and perform tasks while behaving appropriately in a public setting and while being surrounded by a large group of people.

The Department decided against adopting a proposal that would include other species as service animals, including miniature horses and capuchin monkeys. However, the Department requested specific comment on whether it should recognize those animals under its definition of a service animal.

Comments Received

The Department received approximately 1,100 comments on this topic from individuals with disabilities. Commenters generally support dogs as service animals, which is unsurprising as dogs have been, and continue to be, the most common species of service animal relied upon by individuals with disabilities.[50] The AAAE commented that dogs represent approximately 90 percent or more of animals traveling on aircraft, and supported recognizing dogs exclusively as service animals because they are easily trained, and can hold their elimination function for extended periods of time.[51] Assistance Dogs International, North America (ADI–NA) noted that dogs have both the temperament and the capability to assist individuals with disabilities by mitigating their disabilities through the performance of tasks.[52] American Airlines also noted that limiting the species of service animals to dogs provides greater predictability and access for most people with disabilities.[53] The International Air Transport Association (IATA) and individual foreign airline commenters also support including dogs exclusively as service animals. These commenters argued that requiring all carriers, both domestic and foreign, to recognize only dogs, would bring the regulations for the domestic carriage of service animals in alignment with those for international carriage, since foreign carriers have only been required under DOT's ACAA regulation to transport dogs as service

[45] *See* Comments from Air Canada Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328;* Allegiant Air, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19164;* Asiana Airlines *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19340, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19340;* Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221;* and the Michigan Developmental Disabilities Council, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19191.*

[46] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[47] Comment from All Nippon Airways (ANA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19025.*

[48] Comment from American Kennel Club, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19163.*

[49] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[50] In response to the ANPRM, Assistance Dogs International (ADI) noted specifically that dogs have been assisting individuals with disabilities for over 100 years. Comment from Assistance Dogs International, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-4409.*

[51] Comment from AAAE, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19196.*

[52] Comment from Assistance Dogs International, North America (ADI–NA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915.*

[53] Comment from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.*

animals.[54] Air Canada also commented that no country other than the United States has required the acceptance of service animals other than dogs.[55]

More than 400 individual commenters, however, supported also including miniature horses in the Department's definition of a service animal. These commenters noted that some individuals with disabilities may not be able to use dogs to accommodate their disability because of allergies or religious and/or cultural reasons. Furthermore, these commenters note that excluding miniature horses runs counter to DOT's mission of promoting consistency among Federal regulations, as DOJ requires regulated entities, in certain circumstances, to recognize miniature horses as a reasonable accommodation under the ADA.[56] The DREDF commented that DOT's proposal to ''eliminate access for miniature horses is particularly concerning because these animals have access to public accommodations as a reasonable accommodation under the Department of Justice's Americans with Disabilities Act.'' [57] Similarly, the Autistic Self Advocacy Network commented that DOT's proposal to limit service animals to dogs is arbitrary and inconsistent with DOT's stated goal of harmonizing Federal regulatory requirements, and that DOT's proposal to exclude miniature horses is more restrictive than DOJ's regulations implementing Title III of the ADA, which allow people with disabilities to use miniature horses on an individualized basis.[58] Finally, The Disability Coalition (New Mexico) commented that by diverging from the ADA, DOT would be promoting confusion rather than reducing it.[59]

Disability rights advocates that commented in support of including miniature horses in DOT's ACAA definition of a service animal commented that space on the aircraft should not be a concern when considering whether a miniature horse can be accommodated in an aircraft cabin. The commenters argued that the Department's ACAA rule has always required airlines to allow miniature horses to accompany an individual with a disability on aircraft, subject to aircraft size limitations and FAA safety regulations. Psychiatric Service Dog Partners commented that many miniature horses are comparable in size to a St. Bernard, and that many can fold their legs and lie down more easily than their larger equine counterparts.[60] Similarly, Starfleet Service Dogs commented that the height of a miniature service horse, from its withers, should generally be 34 inches or shorter, and that in most cases a Great Dane will be larger and take up more room than a miniature horse.[61]

Airlines and other industry stakeholders who oppose the inclusion of miniature horses argue that miniature horses are too big to be accommodated in the cabin of an aircraft, and that potential safety concerns could arise from transporting miniature horses in the aircraft cabin. A4A asserted that a miniature horse's size, weight, and inability to curl up in a passenger's allotted foot space poses a substantial risk to flight safety, including the safety of passengers and crew, and that the presence of miniature horses in an aircraft cabin would pose a serious risk of injury to passengers and crew during moderate to severe turbulence or an emergency situation due to these animals' weight and size.[62] American Airlines likewise commented that miniature horses are classified as livestock, have hooves, are not as flexible as dogs, are unable to manage their elimination functions the way a trained service dog can, and that a miniature horse's hooves could puncture an aircraft evacuation slide in the event of an evacuation, potentially disabling it.[63]

A smaller number of disability advocacy organizations support the inclusion of cats and other animal species as service animals. Ethiopian Airlines commented that only dogs and cats should be permitted as service and emotional support animals.[64] Similarly, the Transport Workers Union of America recognizes that while dogs are the most common service animals, other types of animals may also be trained to provide needed assistance to individuals with disabilities.[65] The Autistic Self Advocacy Network commented that cats can be trained to perform tasks, such as detecting seizures.[66] Conversely, A4A commented that cats have neither the temperament nor ability to be trained to do work or tasks to assist an individual with a disability or to behave appropriately in an aircraft cabin.[67]

The Department also specifically sought comment on whether it should recognize capuchin monkeys in its revised service animal definition. Several advocacy organization commenters argued that capuchin monkeys deserve special treatment under DOT's ACAA rule and that DOT should require airlines to transport these animals, so long as they remain in a carrier, because of the invaluable accommodations these animals provide to individuals with disabilities. Helping Hands: Monkey Helpers for the Disabled commented that its capuchin monkeys are transported in pet carriers, often undetected, and wear diapers so that the possibility of bodily fluids escaping the carrier are de minimis, and the possibility of disease transmission is prevented.[68]

Airlines and other organizations such as AVMA continue to believe that other animal species, and capuchin monkeys in particular, should not be included in DOT's definition of a service animal because of animal welfare concerns, the

[54] Comment from International Air Transport Association (IATA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

[55] Comment from Air Canada, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328.*

[56] DOJ, while not recognizing miniature horses as service animals, requires entities covered by the ADA to make reasonable modifications in their policies, practices, or procedures to permit an individual with a disability to use a miniature horse that has been individually trained to do work or perform tasks for the benefit of the individual with a disability. DOJ sets forth four assessment factors to assist entities in determining whether reasonable modifications can be made to allow a miniature horse into a specific facility—(1) whether the miniature horse is housebroken; (2) whether the miniature horse is under the owner's control; (3) whether the facility can accommodate the miniature horse's type, size, and weight; and (4) whether the miniature horse's presence will compromise legitimate safety requirements necessary for safe operation of the facility. See 28 CFR 35.136(i); 28 CFR 36.302(c)(9).

[57] Comment from DREDF, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264.*

[58] Comment from Autistic Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.*

[59] Comment from The Disability Coalition (New Mexico), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19219.*

[60] Comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

[61] Comment from Starfleet Service Dogs, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18551.*

[62] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[63] Comment from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.*

[64] Comment from Ethiopian Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-10984.*

[65] Comment from Transport Workers Union, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19183.*

[66] Comment from the Autistic Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.*

[67] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[68] Comment from Helping Hands: Monkey Helpers for the Disabled, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18160.*

potential for serious injury, and zoonotic risks.[69] ADI–NA commented that capuchin monkeys are not domesticated animals and subjecting these animals to stress in the air travel environment increases the chance of their behaving aggressively or at least disruptively during air travel.[70] Finally, A4A commented that capuchin monkeys would likely accompany a qualified trainer on an aircraft, for the purposes of transporting the animal for delivery to an individual with a disability, instead of accompanying an individual with a disability, which ultimately brings the transport of capuchin monkeys beyond the scope of DOT's existing ACAA rule.[71]

DOT Response

The Department has considered the comments received and has decided to adopt, as proposed, a rule limiting the species of service animals to dogs only. This decision considers that dogs are the most common animal species used by individuals to mitigate disabilities both on and off aircraft. A rule requiring airlines to accept trained service dogs will permit the vast majority of service animal users to travel with their service animals while also minimizing confusion and safety concerns for airlines, airports, and individuals with disabilities. Overall, dogs have the temperament and ability to be trained to do work and perform tasks while behaving appropriately in a public setting, and while being surrounded by a large group of people in the close confines of an aircraft cabin. Although airlines may choose to transport other species of animals, such as cats, miniature horses, and capuchin monkeys, that assist individuals with disabilities in the cabin for free pursuant to an established airline policy, they would only be required under Federal law to recognize trained dogs as service animals.

Although some service animal users would prefer to, and in fact do, use miniature horses instead of dogs as service animals, the number of individuals that use trained miniatures horses as service animals is quite small compared to that of service animal dog users.[72] The number of miniature horses transported in the cabin by airlines annually is also exceptionally small, and airlines are free to accommodate the transport of miniature horses for passengers if they choose to do so. There are also practical concerns related to the carriage of miniature horses that may make it difficult for airlines to accommodate these animals on small aircraft safely. While one commenter noted that miniature horses are more flexible than large horses, as a practical matter they are far less flexible than dogs and are unable to curl up at the feet of the handler and fit into the space directly in front of the service animal user's seat, like most dogs. In certain instances, miniature horses may need to occupy the space in front of more than one seat to be accommodated on an aircraft, and in some instances, they may need to occupy the space in front of an entire row of seats to be accommodated in the aircraft.

The Department was also unpersuaded that airlines should be required to carry capuchin monkeys. As the Department stated in its proposal, although trained capuchin monkeys can assist persons with limited mobility with their daily tasks, capuchin monkeys may present a safety risk to other passengers as they have the potential to transmit diseases and may exhibit ''unpredictable aggressive behavior.'' Further, capuchin monkeys fall outside of the regulatory framework because qualified trainers, rather than individuals with disabilities, typically travel by air to deliver the monkeys to an individual with a disability, and would not be accompanied by the service animal user.

D. Breed or Type of Dog

The NPRM

The Department proposed to continue to prohibit carriers from refusing to transport a trained dog as a service animal based solely on breed or generalized physical type. Under the Department's proposal, airlines would continue to assess each animal individually to determine whether a specific animal poses a direct threat to the health or safety of others, instead of determining whether to transport a service animal based on stereotypes or generalized assumptions about how a breed or type of dog may or may not behave. The Department also specifically sought comment on whether the unique environment of a crowded airplane cabin in flight justifies permitting airlines to prohibit pit bull-type dogs, or any other particular breed or type of dog, from traveling on aircraft under the ACAA, even when those dogs have been individually trained to perform as service animals to assist a passenger with a disability.

Comments Received

The Department received nearly 700 comments on whether airlines should be permitted to restrict service dogs based on breed or type. Most commenters supported the Department's proposal, opposing a departmental regulation that would categorically exclude any specific dog breed or type. These commenters noted that individuals with disabilities use a wide range of dog breeds as service animals to accommodate a variety of disabilities, and airlines should not be permitted to refuse transportation to certain breeds or types of dogs as long as the dogs do not pose a direct threat and are individually trained to do work or perform tasks for the benefit of an individual with a disability. Most, if not all, disability advocates supported the Department's proposal to prohibit dog breed or type restrictions, arguing that the determination of whether a particular service animal poses a direct threat should be based on an individualized, observed, and objective assessment by the airline, and should not be based on generalized assumptions or stereotypes about the dog's type or breed. Disability advocates also expressed support for DOT's proposal because it is consistent with DOJ's ADA regulations, with respect to prohibiting regulated entities from limiting a service animal to a specific breed. Various commenters also cited studies that have concluded that environmental factors, rather than a dog's breed, determine a dog's propensity to harm a person or animal.

Regarding a specific breed, the Department received the most feedback in the comments about pit bulls. According to Wisdom Panel, a pit bull DNA testing organization, the term ''pit bull'' does not refer to a single recognized breed of dog, but rather to a genetically diverse group of breeds that are associated by similar physical

[69] Comment from AVMA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19283.*

[70] Comment from ADI–NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915.*

[71] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[72] AAAE commented that dogs represent approximately 90 percent or more of animals traveling on aircraft and according to Psychiatric Service Dog Partners, miniature horses are substantially less common.

Miniature horses are not at all common as pets, nor is there reason to think they would become so. Generally, a person is unable to and does not acquire a miniature horse without deliberate planning. Further, if someone is to travel with a large animal with needs like that of a mini-horse, the training and planning that travel requires carries with it greater assurances of handler responsibility than do the tag-along possibilities of many pets. There is no good reason to believe that allowing access with service miniature horses would translate to any increase in the public trying to bring an assortment of pets with them as service animals.

See comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

traits.[73] Wisdom Panel explains that pit bull-type dogs have historically been bred by combining guard-type breeds with terriers for certain desired characteristics, and, as such, they may retain many genetic similarities to their original breeds and other closely related breeds.[74] According to the Humane Society, 46 percent of dogs in the United States were of mixed breed as of 2012.[75] The American Temperament Test Society found that more than 85 percent of pit bull-type dogs have tested with above average temperaments (85.6 percent of Golden Retrievers and 85 percent of German Shepherds tested the same).[76] According to the Humane Society, an AVMA study found that physical breed standards/visual identification as a way of identifying a dog's breed, which is the method used by airlines to identify dog breed, is seriously flawed. [77] Furthermore, the Humane Society states that an American Journal of Sociological Research study found that animal professionals, veterinarians, and animal control officers were unable to identify correctly dog breeds visually when compared with DNA evidence, and that dogs with blocky heads and thick necks were commonly misidentified as pit bulls because there is no clear definition or set of characteristics that define a ''pit bull'' type.[78] Commenters also cited a growing body of evidence suggesting that pit bulls do not have a stronger bite strength than similar-sized dogs. According to a study cited by the Humane Society, which looked at 150 scientific papers from 1969 to 2009, and two legal cases, many claims about the jaw strength of pit bull-type dogs are based on misinterpretations with no reliable data or sources.[79] Commenters also noted that numerous municipalities across the country are rescinding their pit bull bans, realizing that the bans are misguided. Furthermore, commenters argued that if DOT ultimately requires that all service animals be trained, there would be no need to ban pit bulls for fear of their behavior.

The Department also received many comments in support of allowing airlines to ban specific breeds of service animals. Airlines and airline organizations expressed concerns that not allowing airlines to restrict service animals based on breed could result in an unsafe flying environment and argued that airlines should have the discretion to choose whether to transport dogs that are capable of inflicting serious harm. A4A argued that not allowing airlines to restrict transport of service animals based on breed or generalized type of dog would increase the risk of animal misbehavior, which could result in serious injury to other passengers, crew, and service animals.[80] They argued that certain breeds of dog, which account for a small minority of the total dog population, are not suited to function as trained service animals. They also noted that certain breeds raise legitimate fears from other passengers and animals, including other service dogs and handlers. American Airlines asserted that airplanes are a unique environment—''they are crowded spaces with no opportunity for egress—which could be triggering, and triggering an animal with large and powerful jaws and neck muscles that can be ferocious if 'provoked,' is a direct threat to the health and safety of our crews, passengers, and other service animals.'' [81] American Airlines further argued that there is precedent for adopting a more stringent approach in the airline environment because air travel differs from other places of public accommodation. Some airlines argued that individualized assessments are not enough.[82] For example, Spirit Airline and Air Canada argued that some animals are more prone to aggression and may not exhibit such behavior until they are onboard an aircraft.[83] Thus, even with the ability to refuse transportation to dogs that exhibit aggressive behavior, it may, in some instances, be too late by the time an animal that eventually exhibits aggressive behavior has boarded an aircraft.

Foreign airlines and commenters raised concerns about jurisdictions outside of the United States that impose entry restrictions on certain dog breeds. Deutsche Lufthansa Airlines (Lufthansa) urged DOT to consider allowing airlines to restrict service animals of specific breeds because, with respect to international travel from the United States, there are other additional foreign regulations to comply with concerning the transport of animals.[84] Specifically, Lufthansa noted that France and Germany, for example, have implemented strict entry bans for specific breeds of dogs, such as Staffordshire Bull Terriers, American Pitbull Terriers, Mastiff type dogs, and Tosa Inu (France); and Pit Bull Terriers, American Staffordshire Terriers, Staffordshire Bull Terriers, and Bull Terrier (Germany), and that requiring airlines to transport all breeds may present a conflict of laws that would cause severe disruption, not only to the airline but also to passengers.[85]

Many individual commenters also opposed recognizing pit bulls as service animals. According to *dogbites.org*, which obtains data on canine-related injuries and fatalities from news reports, photographs, police reports, coroner reports, and court filings, canines killed 512 individuals in the United States between 2005 and 2019.[86] Of the 512 individuals killed by dogs, *dogbites.org* reports that pit bulls were involved in 346 of these deaths (66 percent of the deaths) despite only comprising about 7 percent of the total U.S. dog population.[87] Similarly, media reports and news accounts tracked by ANIMALS 24–7 since 1982 indicate that approximately one pit bull in 100 will kill or disfigure a human, or kill another pet or livestock animal, each year.[88] According to ANIMALS 24–7, two recent studies published in prominent scientific journals point toward anatomical differences in dog brain structure among various breeds, which in dogs bred for centuries to fight, appear to be linked to reactivity and aggression.[89]

[73] *https://help.wisdompanel.com/s/article/Does-Wisdom-Panel-test-for-Pit-bull.*

[74] *Id.*

[75] Comment from the Humane Society of the United States and the Humane Society Legislative Fund, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19184.*

[76] *https://atts.org/breed-statistics/statistics-page1/.*

[77] Comment from the Humane Society of the United States and the Humane Society Legislative Fund, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19184.*

[78] Comment from the Humane Society of the United States and the Humane Society Legislative Fund, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19184.*

[79] *Id.*

[80] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[81] Comment from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.*

[82] *Id.*

[83] *See* Comments from Air Canada Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328,* and Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221.*

[84] Comment from Deutsche Lufthansa Airlines (Lufthansa), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19351.*

[85] Comment from Lufthansa Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19351.*

[86] Comment from *DogsBite.org, https://beta.regulations.gov/comment/DOT-OST-2018-0068-18935.*

[87] *Id.*

[88] Comment from ANIMALS 24–7, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-12212. https://beta.regulations.gov/comment/DOT-OST-2018-0068-12212.*

[89] *Id.*

DOT Response

The Department is declining in this final rule to adopt a categorical exclusion for particular breeds or types of dogs as service animals and will continue at this time to prohibit airlines from refusing to accommodate a dog that is individually trained to do work or perform tasks for the benefit of a qualified person with a disability and that otherwise satisfies the requirements of a service animal based solely on the dog's breed or generalized type. However, the final rule specifies that airlines are permitted to make an individualized assessment based on reasonable judgement and objective evidence to determine if a service animal poses a direct threat to the health or safety of others. The Department believes that this standard, which is based on objective evidence of the dog's behavior, rather than generalized assumptions about how a breed or type of dog would be expected to behave, provides airlines with the best means of determining whether the particular animal poses a direct threat to the health and safety of others.

Furthermore, prohibiting airlines from banning particular breeds of dogs, including pit bull-type dogs, on aircraft is consistent with DOJ guidance under the ADA. We note that DOJ also rejects an outright ban on service animals because of their breed in implementing its regulations under the ADA. DOJ has advised municipalities that prohibit specific breeds of dogs that they must make an exception for a service animal of a prohibited breed, unless the dog poses a direct threat to the health or safety of others, a determination that must be made on a case-by-case basis.[90] Commenters suggesting that airlines are not able accurately to distinguish a pit bull-type dog from a non-pit bull-type dog that may have similar features unless DNA testing has been conducted further supports the Department's position that categorically excluding particular breeds is not appropriate.

The Department also recognizes the concerns raised by IATA and foreign airlines that certain foreign jurisdictions may have laws prohibiting passengers from bringing certain breeds of dogs into these jurisdictions. To address this concern, the Department has included language, in section 382.79(a)(3), that makes clear that an airline may deny transport to a service animal if the animal's carriage would violate applicable health or safety requirements of a foreign government.

The Department understands the concerns raised about pit bulls and certain other breeds or types of dogs that have a reputation of attacking people and inflicting severe and sometimes fatal injuries. The Department also understands that there may be concerns that certain dogs may be dangerous, particularly dogs that have been bred to fight, which may be linked to a heightened degree of reactivity and aggression. The Department will continue to monitor published studies or accounts of dog behavior by breed or type and reports of incidents involving service dogs, and if there are compelling studies or data indicating that there are particular dog types or breeds that are established to pose a heightened threat to the health and safety of people in close proximity, we will revisit this issue. At this time, however, the Department finds that the airlines' ability to conduct an individualized assessment of a service animal's behavior to determine whether the service animal poses a direct threat to the health or safety of others is an adequate measure to ensure that aggressive animals are not transported on aircraft, rather than permitting airlines to ban an entire breed or type of dog.

E. Considerations on Alignment With DOJ Definition

The NPRM

In the NPRM, the Department proposed to define a service animal as a dog that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability. DOT's proposed definition of a service animal, which is more closely aligned with DOJ's definition of a service animal under the ADA, is intended to address concerns raised by airlines, airports, and disability advocates about challenges associated with inconsistencies between the definition of a service animal in the airport environment and on aircraft. DOT's existing service animal regulations require airlines to recognize emotional support animals, and all species of service animals, with limited exceptions. Meanwhile, DOJ's ADA regulations, which apply to public and commercial airports and airport facilities operated by businesses like restaurants and stores, limit service animals to dogs, and do not recognize emotional support animals as service animals.[91] The significant inconsistencies between DOT's former ACAA definition of a service animal, and DOJ's ADA definition of a service animal have presented practical challenges for airlines and airports and the traveling public. The Department, through its NPRM proposal, sought to promote greater consistency among Federal regulatory requirements, to decrease confusion for individuals traveling with service animals, to recognize the distinct characteristics of an aircraft cabin as compared to other indoor environments, and to streamline the treatment of service animals in the context of air travel.

Comments Received

The Department received more than 7,200 comments on the proposed definition of a service animal, with a nearly even split between individual commenters who supported or opposed the Department's proposed definition.

Most disability rights advocates and all of the airlines and airline organizations that commented on the NPRM expressed support for the Department's proposed definition of a service animal. The American Council of the Blind supported the proposal, stating that limiting service animals to trained animals will make the requirements for airlines and their

[90] *See* Frequently Asked Questions about Service Animals and the ADA, Questions 22–24, available at *https://www.ada.gov/regs2010/service_animal_qa.html https://www.ada.gov/regs2010/service_animal_qa.html* (July 20, 2015):

[I]f an individual uses a breed of dog that is perceived to be aggressive because of breed reputation, stereotype, or the history or experience the observer may have with other dogs, but the dog is under the control of the individual with a disability and does not exhibit aggressive behavior, the public accommodation cannot exclude the individual or the animal from the place of public accommodation. The animal can only be removed if it engages in the behaviors mentioned in § 36.302(c) (as revised in the final rule) or if the presence of the animal constitutes a fundamental alteration to the nature of the goods, services, facilities, and activities of the place of public accommodation.

See also 75 FR 56236, 52266–56267 (September 15, 2010):

[I]f an individual uses a breed of dog that is perceived to be aggressive because of breed reputation, stereotype, or the history or experience the observer may have with other dogs, but the dog is under the control of the individual with a disability and does not exhibit aggressive behavior, the public accommodation cannot exclude the individual or the animal from the place of public accommodation. The animal can only be removed if it engages in the behaviors mentioned in § 36.302(c) (as revised in the final rule) or if the presence of the animal constitutes a fundamental alteration to the nature of the goods, services, facilities, and activities of the place of public accommodation.

[91] DOJ explains that it did not classify emotional support animals as service animals because the provision of emotional support, well-being, comfort and companionship does not constitute work or tasks. *See* Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 75 FR 56236, 56269 (Sept. 15, 2010).

employees less complicated and more succinct;[92] while other groups supported the definition because it is more consistent with DOJ's ADA definition of a service animal. These commenters argued that a more consistent definition would benefit travelers with disabilities.

The majority of airlines and airline organizations likewise supported the Department's proposal, in the interest of greater regulatory consistency. IATA[93] commented that a service animal definition that is more consistent between the ACAA and the ADA will provide greater clarity for airlines, airports, individuals with disabilities, and the traveling public. Likewise, A4A commented that DOT's proposal to more closely align its definition with DOJ's rules implementing the ADA would not only decrease confusion for individuals with a disability, airline personnel, and airports, but would also establish a clear distinction between a legitimate service animal that is trained to do work or perform a task for the benefit of a person with a disability and a pet.[94]

Several disability advocates opposed the Department's proposed definition of a service animal. U.S. Support Animals urged the Department to focus on the language of the ACAA, which prohibits airlines from discriminating against individuals with disabilities, and discouraged DOT from seeking to align its definition of a service animal with DOJ's ADA rule, when the ADA was enacted four years after the ACAA[95] U.S. Support Animals further commented that if Congress intended for the ACAA to be ''subordinate'' to the ADA, it could have easily repealed the ACAA and included its provision in the ADA.[96] Both U.S. Support Animals and the Autistic Self Advocacy Network commented that it would be improper for the Department to align its ACAA definition of a service animal with DOJ's ADA definition because unlike the ADA, which is broadly applicable to a number of contexts, the ACAA applies only to air transportation, and its regulations should pertain to the specific circumstances of air travel.[97] These commenters believe that it would be more appropriate for DOT to align its regulations with HUD, which enforces FHA regulations,[98] because discrimination in housing is more analogous to air travel as travelers who depend on service animals for assistance will likely be at their destination for longer periods of time and the loss of their service animal would be more acute. Specifically, the Autistic Self Advocacy Network notes that while an individual with a disability may be impacted somewhat by being separated from their service animal for a few hours while at establishments covered by the ADA, *e.g.,* stores, restaurants, movie theaters, etc., the impact of being separated from a service animal is more significant in the housing and transportation context as the separation would be for a much longer duration.

DOT Response

The Department has considered the comments it received and Congress's mandate in the FAA Act that the Department consider whether it should align its ACAA definition of a service animal with the service animal definition established by the DOJ in its rule implementing the ADA. In this final rule, the Department is revising its definition of a service animal under the ACAA as a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability. Species of animals other than dogs, emotional support animals, comfort animals, companionship animals, and service animals in training are not service animals under this definition. This revised definition does not preclude airlines from allowing passengers to travel with animals that are not included within the revised service animal definition; however, airlines are not required by Federal law to treat those animals as service animals. This revised definition is more in line with DOJ's definition of a service animal and takes into consideration, as commenters raised, the challenges associated with the inconsistencies between the definition of a service animal in the airport environment and on aircraft that stakeholders have identified.[99]

2. Definition of Service Animal Handler

The NPRM

The Department proposed to define a service animal handler as a qualified individual with a disability who receives assistance from a service animal(s) that does work or performs tasks that are directly related to the individual's disability, or a safety assistant[100] who accompanies an individual with a disability traveling with a service animal(s). The Department proposed that the service animal handler would be responsible for keeping the service animal under control at all times, and caring for and supervising the service animal, which includes toileting and feeding. The DOT's proposed definition of a service animal handler differed from DOJ's technical assistance, which states that a service animal handler can be either an individual with a disability or a third party who accompanies the individual with a disability.[101] The Department proposed to limit the definition of service animal handlers to the individual with a disability who is being helped by the animal and a safety assistant, meaning another individual who is required to travel with the person with a disability to assist that person in an evacuation from the aircraft, in order to make clear that service animal trainers and other

[92] Comment from American Council of the Blind, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18365.*

[93] Comment from International Air Transport Association, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

[94] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[95] Comment from U.S. Support Animals, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19248.*

[96] *Id.*

[97] Comments from U.S. Support Animals, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19248* and Autism Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.*

[98] HUD, which enforces Fair Housing Act regulations, recognizes two types of assistance animals: (1) Service animals, and (2) other trained or untrained animals that do work, perform tasks, provide assistance, and/or provide therapeutic emotional support for individuals with disabilities (''support animal''). See Service Animals and Assistance Animals for People with Disabilities in Housing and HUD-Funded Programs, FHEO Notice: FHEO–2020–01 at *https://www.hud.gov/sites/dfiles/PA/documents/HUDAsstAnimalNC1-28-2020.pdf* (Jan. 28, 2020), and *https://www.hud.gov/sites/dfiles/PA/documents/AsstAnimalsGuidFS1-24-20.pdf.*

[99] Although the Department, in this final rule, has closely aligned its service animal definition under the ACAA with DOJ's service animal definition under the ADA, the substantive requirements in this rule differ from DOJ's requirements for service animals under the ADA in numerous respects. For instance, in this final rule, the Department allows carriers to require passengers traveling with service animals to submit a DOT health and behavior attestation form and for long flights, a DOT service animal relief attestation form. Conversely, DOJ regulations prohibit covered entities from requiring documentation from a service animal user, such as proof that the animal has been certified, trained, or licensed as a service animal. *See* 28 CFR 35.136(f), 28 CFR 36.302(c)(6).

[100] The term ''safety assistant'' is used in the Department's disability regulation. See 14 CFR 382.29(b).

[101] *See* Frequently Asked Questions about Service Animals and the ADA, Questions 27, available at *https://www.ada.gov/regs2010/service_animal_qa.html,* (July 20, 2015), ''The ADA requires that service animals be under the control of the handler at all times. In most instances, the handler will be the individual with a disability or a third party who accompanies the individual with a disability.'' *https://www.ada.gov/regs2010/service_animal_qa.html.*

passengers traveling with an individual with a disability on aircraft who are not safety assistants would not be considered service animal handlers under the ACAA rules. The Department sought comment generally on its decision to define the term ''service animal handler'' and sought comments on its proposed definition. The Department also sought comment on what impact, if any, its exclusion of third parties as service animal handlers might have on individuals with disabilities who are traveling on aircraft with a service animal.

Comments Received

Disability advocates, such as PVA and DREDF, opposed DOT's proposed definition of a service animal handler, arguing that the Department should make its definition of a service animal handler consistent with DOJ's ADA guidance on service animal handlers, which includes third parties.[102] Disability Rights Florida also commented that it ''urges DOT to use the DOJ ADA formulation to allow a third party, such as a parent, caretaker or aide, to also be a service animal handler for a young child or other individuals with a disability.'' [103]

Some disability advocates also opposed DOT's proposal to define safety assistants as service animal handlers, arguing that safety assistants are not service animal handlers, as their purpose is to ensure safe disembarkation from the aircraft, not to handle a passenger's service animal. Open Doors Organization commented that a ''safety assistant's sole purpose is to assist a traveler with a disability in the event of an emergency, not to provide personal care assistance or any other non-safety-related help to a traveler.'' [104] Similarly, Psychiatric Service Dog Partners commented that a ''member of the disabled service animal user's party should not need to meet the 'safety assistant' description in 14 CFR 382.29 in order to provide handling assistance.'' [105] Conversely, with respect to airlines, the Association of Asian Pacific Airlines (AAPA) s and A4A both expressed support for DOT's proposal to include safety assistant in its definition of a service animal handler.[106]

DOT Response

The Department has decided to define the term ''service animal handler'' in its disability regulation differently from proposed.[107] The Department is persuaded by the comments supporting the recognition of third-party service animal handlers consistent with DOJ's ADA guidance and is revising its proposed definition of a service animal handler in this final rule to more closely align with DOJ's treatment of a service animal handler. The revised definition includes third parties in the DOT definition of a service animal handler. It also excludes safety assistants because, as commenters noted, safety assistants do not necessarily serve the same role as service animal handlers. The revised definition also provides for the situation where a child with a disability, who may not be able to control a service animal physically, is accompanied by a parent or other third party who physically handles and controls the service animal on the child's behalf.

3. Service Animal Documentation

In the NPRM, the Department proposed to allow airlines to require individuals traveling with a service animal to submit three DOT-created forms: (1) A certification of a service animal's good behavior and training; (2) a certification of good health; and (3) for flight segments of eight hours or more, a certification that the animal would not need to relieve itself or could relieve itself in a way that does not create a health or sanitation risk. The Department proposed that each form include a warning to service animal users that it would be a Federal crime, in violation of 18 U.S.C. 1001, to make false statements or representations on these forms to secure disability accommodations. The Department also proposed to allow airlines to require passengers to submit completed versions of these forms as a condition of travel. The Department sought comment on its proposal to standardize the service animal documentation process by allowing airlines to require DOT forms, and its proposal that the DOT forms be the only documentation that an airline could require from a passenger traveling with a service animal. The Department recognized that the DOJ does not allow these types of forms for public accommodation under the ADA. The Department reasoned, however, that air transportation is unique because it involves transporting a large number of individuals in a confined space thousands of feet in the air with no means of egress; accordingly, it stated that it would be appropriate for airlines to require these forms to ensure that the animal does not pose a health or safety risk to other passengers or service animals before boarding the cabin of the aircraft.

DOT received nearly 500 comments on its proposal to allow airlines to require service animal handlers to submit the various forms to airlines. We will discuss each form and its elements in greater detail below.

A. Behavior and Training Form

The NPRM

First, the Department proposed to allow airlines to require a U.S. Department of Transportation Air Transportation Service Animal Behavior and Training Attestation Form (Behavior and Training Form), to be completed by the service animal handler, which often is the same person as the individual with a disability who receives assistance from the service animal. The proposed Behavior and Training Form would have required the handler to certify that: (1) The animal has been individually trained to do work or perform tasks for the benefit of the passenger with a disability; (2) the animal has been trained to behave properly in public; (3) the handler is aware that the service animal must be under the handler's control at all times; (4) the handler is aware that if the animal misbehaves in a way that

[102] Comments from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429*, and DREDF, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264.*

[103] Comment from Disability Rights Florida, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19336.*

[104] Comment from Open Doors Organization, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305.*

[105] Comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

[106] *See* Comment from Association of Asian Pacific Airlines (AAPA), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19323,* ''[w]e also support DOT's proposal to limit the definition of a service animal handler to a qualified individual with a disability or a safety assistant travelling with them, who will be responsible for keeping the animal under control at all times, and caring for and supervising the service animal, including toileting and feeding.'' Also, see comment from A4A at Service animal handler, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240,* ''[w]e support DOT's proposed definition of ''service animal handler'' as ''a qualified individual with a disability who receives assistance from a service animal(s) that does work or performs tasks that are directly related to the individual's disability, or a safety assistant, as described in section 382.29(b), who accompanies an individual with a disability traveling with a service animal(s).''

[107] The definition of service animal handler in 14 CFR part 382 is solely for the purpose of determining the individuals who would be responsible for the care and control of an animal that does work or performs tasks that are directly related to an individual's disability. It does not mean that these individuals would be considered service animal handlers under 14 CFR part 121. Specifically, they are not considered ''persons necessary for the safe handling of animals'' in section 14 CFR 121.583(a)(4)(ii), which provides that a person necessary for the safe handling of animals is excluded from the passenger-carrying requirements of part 121. *See* 14 CFR 121.583(a)(4)(ii).

indicates it has not been properly trained, then the airline may treat the animal as a pet; and (5) the handler is aware that the handler may be liable for damage caused by the service animal's misbehavior, so long as the airline charges passengers without disabilities for similar kinds of damage.

The Department proposed to allow airlines to require this form as a condition of transport for individuals traveling with service animals because the form would allow airlines to receive direct assurances from service animal users of their animal's good behavior and training. The form would have also served as an instrument to educate passengers traveling with service animals on how service animals in air transportation are expected to behave, and that the airline could charge passengers for damage caused by a service animal, so long as the airline had a policy of charging other passengers for similar kinds of damage. The Department also reasoned that the form itself would have the potential to serve as a deterrent for individuals who might otherwise seek to claim falsely that their pets are service animals, as those individuals may be less likely to falsify a Federal form and thus risk the potential for criminal prosecution.

The Department sought comment on its proposal to allow airlines to require the DOT Behavior and Training Form, the general content of the form, and whether the form would help ensure that service animals are properly trained. DOT also sought comment on whether the form would serve as an effective fraud deterrent for passengers who might try to misrepresent their pets as service animals, and the impact this form would potentially impose on those individuals traveling with traditional service animals who were not previously required to provide documentation to airlines.[108]

Comments Received

The proposed Behavior and Training Form was opposed by nearly sixty percent of individuals, and the great majority of the disability rights advocacy organizations, who commented on the issue. Those commenters who opposed this form, such as the National Council on Disability, the American Council for the Blind, and DREDF, argued that it would be unduly burdensome for passengers with disabilities, especially to those who had never been required to submit any type of documentation to travel with their service animal in the past. PVA commented that ''[d]ecades of access without documentation have been provided for the vast majority of service animal users,'' and that requiring all passengers with disabilities who use service animals to attest to their animal's behavior and training, and provide a health form to gain access ''burdens an individual's civil rights without any justification that such burden is needed.'' [109] Other opponents argued that the forms were unnecessary and inconsistent with other Federal civil rights laws.

The proposed Behavior and Training Form was supported by about forty percent of individuals, all of the airline and industry organizations, and a minority of advocacy organizations that commented on the issue. Supporters of the form, such as A4A, argued that it would provide a uniform method of ensuring that animals have been properly trained to perform a task or function and trained to behave in public, and the consistency of a DOT form would facilitate a smoother travel experience for persons with disabilities.[110] Spirit Airlines commented that the DOT forms would ''lessen the opportunity for confusion and promote uniformity across domestic air travel.'' [111] Psychiatric Service Dog Partners also commented that if DOT permitted airlines to require a form, it is important that the forms be uniform, transferable among airlines, and available to individuals with disabilities in an accessible format to reduce burdens on individuals traveling with service animals.[112]

While a number of organizations (such as ADI–NA, America's VetDogs, and the Open Doors Organization) strongly oppose documentation requirements for individuals with disabilities traveling with trained service animals, these organizations commented that if the Department were to allow airlines to require behavior and training attestations, it would be less burdensome on individuals with disabilities if these attestations could be made through a check-box system available on each airline's website during the reservation process.[113] A4A and IATA indicated that the only effective way to reduce fraud is to require passengers to obtain a certification from an accredited service dog training organization such as Assistance Dogs International or the International Guide Dog Federation that the animal has been properly trained (either by the organization itself or by the dog's handler).[114]

DOT Response

The Department is of the view that allowing airlines to require individuals with disabilities to attest to their animal's good behavior and training serves the important purpose of ensuring that passengers are aware of how their animals are expected to behave on aircraft. Furthermore, the Department believes that allowing airlines to require an attestation completed by the service animal users, rather than a veterinarian or other third party, as a means of verifying the service animal's good behavior, training and good heath, will impose minimal burdens on service animal users. The Department also believes that a behavior and training attestation will assure airline personnel and the traveling public that an animal, which is being presented as a service animal for uncrated transport in the aircraft cabin, has been both trained to perform a task or function for the passenger with a disability, and has been trained to behave in public. As such, this final rule allows airlines to require passengers

[108] The Department was aware of airline policies requiring or recommending that passengers with disabilities traveling with service animals carry vaccination, training, or behavior documentation with them. However, these airline policies often were applied only to ESAs or PSAs. In 2019, the Department's Office of Aviation Consumer Protections stated that ''[w]hile section 382.117 clearly sets forth the type of medical documentation that airlines may request from ESA and PSA users to reduce likelihood of abuse by passengers wishing to travel with their pets, the regulation does not explicitly permit or prohibit the use of additional documentation related to a service animal's vaccination, training, or behavior.'' *See* Guidance on Nondiscrimination on the Basis of Disability in Air Travel, Final Statement of Enforcement Priorities Regarding Service Animals, 84 FR 43480, 43484 (Aug. 21, 2019).

[109] *See* Comments from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429 and DREDF, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264.* PVA and Disability Rights Florida did argue that such forms could be required of emotional support animal users; however, this issue is now moot in light of the Department's decision to allow airlines not to recognize emotional support animals as service animals.

[110] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[111] Comment from Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221.*

[112] Comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

[113] Comments from ADI–NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915;* America's VetDogs, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18138;* and Open Doors Organization, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305.*

[114] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240 and IATA, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

traveling with a service animal to submit a completed U.S. Department of Transportation Service Animal Air Transportation Form (Air Transportation Form), as described more fully below, which includes an attestation from the service animal handler of a service animal's good behavior and training.

The Department is adopting its proposal that the only forms that airlines may require of passengers with service animals are the forms developed by the Department. In 2019, the Department's Office of Aviation Consumer Protections had stated that it does not ''intend to take action against an airline for asking service animal users to present documentation related to a service animal's vaccination, training, or behavior, so long as it is reasonable to believe that the documentation would assist the airline in determining whether an animal poses a direct threat to the health or safety of others.'' [115] This final rule makes it clear that airlines are not permitted to require any other documentation as a condition of transport, beyond the ones described in the rule. As such, service animal users will no longer have to navigate different forms propounded by different airlines.

With regard to the content of the DOT form, we decline the suggestion of A4A that the form require service animal handlers to certify that the animal was either trained or evaluated by an accredited organization as a means of validating the animal's training. While DOT provides space on its form for a service animal handler to state the organization or individual that trained the service animal to do work or perform tasks to assist the handler, DOT does not require that individuals with disabilities have their animal trained or evaluated by an accredited organization as a condition of transport. The Department similarly rejects the suggestion from IATA that every service animal user must obtain a certification of training from a specific organization, as this requirement could impose an undue burden on service animal users.[116]

B. Health Form

The NPRM

DOT proposed to allow airlines to require a U.S. Department of Transportation Air Transportation Service Animal Health Form (Health Form), to be completed by the service animal's veterinarian. The Centers for Disease Control and Prevention (CDC), a major operating component of the U.S. Department of Health and Human Services, requires that all dogs imported into the United States, including service dogs, be vaccinated for rabies if coming from a high-risk rabies country.[117] The proposed Health Form was modeled after a number of State certificate of veterinary inspection (CVI) forms and the United States Department of Agriculture (USDA) APHIS 7001 form.[118] DOT proposed that the passenger's veterinarian would describe the animal, indicate whether the service animal's rabies vaccinations were up to date, state whether the animal had any known diseases or infestations, and state whether the veterinarian is aware of any aggressive behavior by the animal. The Department reasoned that such a form would help to ensure that the animal does not pose a direct threat to the health or safety of others. The Department indicated that it had consulted with airlines and the AVMA in drafting the content of the form.

The Department sought comment on its proposal to permit airlines to require the proposed Health Form as a condition of travel, the general content of the Health Form, and whether airlines should be able to refuse transportation to a service animal based on the information contained in the form. The Department asked whether the proposed Health Form would ensure effectively that a service animal does not pose a direct threat to the health or safety of others by ensuring that travelers do not contract rabies from a service animal if bitten. The Department asked whether veterinarians should indicate on the form whether, to the veterinarian's knowledge, the animal has ever exhibited aggressive behavior. The Department sought comment on whether it would be burdensome for individuals traveling with service animals to allow airlines to require the Department's Health Form. Finally, the Department asked whether it should allow airlines to require passengers traveling with service animals to provide photo identification of the service animal as an additional measure to verify a service animal's identity.

Comments Received

The proposed Health Form was opposed by most individuals and nearly all of the disability rights advocacy organizations who commented on the issue. Opponents raised many of the same arguments that they raised with regard to the proposed Behavior and Training Form, but added that the Health Form would have a financial impact on passengers with disabilities because it would require them to make an extra visit to a veterinarian and potentially to incur veterinarian fees.[119] Opponents noted that requiring a form from a veterinarian could also significantly limit an individual's ability to travel on short notice. Advocates also argued that veterinarians may be uncomfortable attesting to the behavior of the animal, even if the attestation is limited to information within the personal knowledge of the veterinarian. Other advocates argued that because the overall incidence of rabies in the United States is exceedingly low, the form would not be an effective means to determine if an animal poses a direct threat. More generally, advocates including PVA and DREDF argued that the data on the proposed Health Form would not provide a meaningful basis from which to conclude that an animal poses a direct threat.[120]

Proponents of the proposed Health Form included about forty-five percent of individual commenters and all industry commenters. Proponents generally argued that a DOT form would provide a uniform means of determining whether an animal poses a direct threat. AVMA agreed that a form with rabies information should be required, stating that ''rabies vaccination for dogs is necessary to protect both animal and public health, and, accordingly, it is reasonable and prudent to require proof of vaccination against this disease.'' [121]

[115] Guidance on Nondiscrimination on the Basis of Disability in Air Travel, Final Statement of Enforcement Priorities Regarding Service Animals, 84 FR 43480, 43484 (August 21, 2019).

[116] Other commenters suggested additional modifications to the content of the form. Allegiant Air and ANA suggested that the form make clear that all boxes must be checked for the animal to be accepted for transport. We are of the view that this aspect of the form is already sufficiently clear. Psychiatric Service Dog Partners suggested that the form should contain both a ''YES'' box and a ''NO'' box, so that individuals take greater time to assess the questions and understand the answers. We decline this suggestion as an unnecessary.

[117] A current list of high risk rabies countries may be found at: *https://www.cdc.gov/importation/bringing-an-animal-into-the-united-states/rabies-vaccine.html. See* 42 CFR 71.51(e).

[118] *https://www.aphis.usda.gov/library/forms/pdf/APHIS7001.pdf.*

[119] Comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092,* Psychiatric Service Dog Partners estimated the total cost of service animal users being required to fill out veterinary forms at almost $60 million.

[120] See comments from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429, and DREDF, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264,* ''[T]he issue is the level of training of the animal, not its health, that poses the threat.'' *See also* Comment from ADI, NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915.*

[121] Comment from AVMA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19283.*

On the other hand, AVMA argued that creating a DOT-specific form was unnecessary because veterinarians could fill out a CVI for the user.[122] AVMA pointed out that CVIs are ''existing official forms that are required by most states for interstate transport and international travel under existing laws.'' [123] AVMA also urged the Department not to adopt a form that would require a veterinarian to attest to the behavior of the animal. AVMA urged that this aspect of any form be filled out by the service animal user.

A4A and certain individual airlines suggested that to reduce burdens on service animal users, the proposed Health Form should be signed by the passenger instead of a veterinarian, and should be combined with the Behavior and Training Form into a single document.[124] Some of these commenters also suggested that the Department should allow airlines to require passengers to travel with copies of their service animal's veterinary records. Open Doors Organization took the position that if DOT allowed airlines to require service animal users to provide animal health documentation, airlines should be able to require passengers to travel with veterinary forms, but not to fill out the Health Form.[125] Finally, certain commenters suggested that the essential information from the veterinary form could be provided during each airline's reservation process, rather than through submission of an official DOT form.

DOT Response

The Department believes that it is important and appropriate to allow airlines to require passengers to affirm that their service animal is in good health as a condition of transport. We agree with AVMA and others who indicate that it is ''reasonable and prudent'' to require proof of rabies vaccinations.[126] We also believe that it is prudent to require information relating to whether the animal is free of diseases that may endanger the health of humans or other animals.

However, the Department recognizes the difficulties that would arise from a requirement that the Health Form be filled out by a veterinarian, such as the expense that would be incurred by service animal users and the potential reluctance of veterinarians to attest to the animal's behavior. To alleviate the burden and difficulties, the Department has modified the form in the final rule such that the passenger, rather than a veterinarian, will be required to provide information about the health and behavior of the animal. The Department has also decided to combine the proposed Health Form with the proposed Behavior and Training Form to create a single one-page document called the ''Service Animal Air Transportation Form'' (Air Transportation Form) to reduce burdens further on both service animal users and airlines. This one-page Air Transportation Form will also include space for the service animal handler to provide a physical description of the service animal. Because the Air Transportation Form will contain information on the animal's physical description and health, the Department does not view it as necessary to permit airlines to require the passenger to carry the animal's veterinary records or provide a photo of the animal as a condition of transport.

The Department expects that these adjustments will allow airlines to obtain and process important health and safety information in an efficient and uniform fashion while minimizing burdens on the service animal user.[127] The Department recognizes that despite these adjustments, the combined Air Transportation Form could impose a new burden on certain service animal users. Prior to this final rule, the regulation did not explicitly permit or prohibit the use of additional documentation related to a service animal's vaccination, training, or behavior. Beginning in 2018, some airlines began adopting policies requiring behavior, training, and health forms for certain service animals. In August 2019, the Department's Office of Aviation Consumer Protection stated that it does not ''intend to take action against an airline for asking service animal users to present documentation related to a service animal's vaccination, training, or behavior, so long as it is reasonable to believe that the documentation would assist the airline in determining whether an animal poses a direct threat to the health or safety of others.'' [128] The Department regards allowing airlines to require a DOT-issued Air Transportation Form to be less burdensome and a better option for individuals traveling with service animals than allowing airlines to develop their own individual forms to assist them in determining whether a service animal poses a direct threat to the health or safety of others.

The Air Transportation Form serves the vital purpose of assuring airlines and the traveling public that the user's service animal is vaccinated from rabies, has not been exposed to rabies, and to the user's knowledge is free of pests and diseases that would endanger people or other animals or would endanger public health. The form also requires service animal users to attest that their animals are both trained to perform a specific task or function and trained to behave in public. It educates the user that the animal must be harnessed, leashed, or otherwise tethered; that the animal may be treated as a pet if it engages in disruptive behavior; and that the user may be responsible for any damage caused by the service animal. The Air Transportation Form also provides airlines with a means of contacting the service animal user and the animal's veterinarian in the event of an incident that endangers other passengers or service animals. Finally, the Federal nature of the form serves to impress upon individuals the importance of filling it out properly.[129] The Department continues to hold the view that a different approach from the ADA with respect to documentation is appropriate given the unique realities of air transportation, which place the service animal in close proximity with many humans and potentially with other animals for hours in a tightly confined cabin with no means of egress from the aircraft.

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[122] *Id.*

[123] *Id.*

[124] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[125] Comment from Open Doors Organization, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305.*

[126] We recognize that instances of rabies in the United States are rare, and that dogs are generally required to be vaccinated for rabies.

[127] PVA and DREDF commented that they opposed the use of documentation; however, if the Department were to continue to allow it, then uniform Federal documentation was preferable to individual airline forms. See comments from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429, and DREDF, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264.*

[128] *See* Guidance on Nondiscrimination on the Basis of Disability in Air Travel, Final Statement of Enforcement Priorities Regarding Service Animals, 84 FR 43480, 43484 (Aug. 21, 2019).

[129] The Federal crime notification is discussed in greater detail in the next section below.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it deplays a valid OMB control number. The OMB control number for this information collection is _____.

Warning: It is a Federal crime to make materially false, fictitious, or fraudulent statements, entries, or representations knowingly and willfully on this form to secure disability accommodations provided under regulations of the United States Department of Transportation (18 U.S.C. § 1001).

U.S. Department of Transportation Service Animal Air Transportation Form

Service Animal Handler's Name: _____ Phone: _____

Service Animal User's Name (if different from Handler): _____ Phone: _____

Service Animal Handler's Email: _____ Animal's Name_____

Description of the Animal (including weight): _____

Animal Health

☐ _____ is vaccinated for rabies. Date of last vaccination: _____ Date vaccination expires in the dog: _____
[Insert Animal's Name]

☐ To my knowledge, _____ does not have fleas or ticks or a disease that would endanger people or other animals.
[Insert Animal's Name]

Veterinarian's Name (signature not required): _____ Phone: _____

Animal Training and Behavior

☐ _____ has been trained to do work or perform tasks to assist me with my disability.
[Insert Animal's Name]

Name of Animal Trainer or Training Organization: _____ Phone: _____

☐ _____ has been trained to behave in a public setting.
[Insert Animal's Name]

☐ I understand that a properly trained dog remains under the control of its handler. I understand that a properly trained dog does not act aggressively by biting, barking, jumping, lunging, or injuring people or other animals. It also does not urinate or defecate on the aircraft or in the gate area.

☐ I understand that if _____shows that it has not been properly trained to behave in public, then the airline may treat
[Insert Animal's Name]

_____ as a pet by charging a pet fee and requiring _____to be transported in an FAA-approved pet carrier.
[Insert Animal's Name] [Insert Animal's Name]

☐ To the best of my knowledge, _____ has not behaved aggressively or caused serious injury to another person/dog.
[Insert Animal's Name]

If you cannot check the box above, please explain: _____

Other Assurance

☐ I understand that _____ must be harnessed, leashed, or tethered at all times in the airport and on the aircraft.
[Insert Animal's Name]

☐ I understand that if _____ causes damage, then the airline may charge me for the cost to repair it, as long as the airline
[Insert Animal's Name]
would also charge passengers without disabilities to repair the similar kinds of damage.

☐ I am signing an official document of the U.S. Department of Transportation. My answers are true to the best of my knowledge. I understand that if I knowingly make false statements on this document, I can be subject to fines and other penalties.

Signature of the Service Animal Handler: _____ Date: _____

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C. Relief Form

The NPRM

The third and final form that DOT proposed to allow airlines to require is a U.S. Department of Transportation Service Animal Relief Attestation Form (Relief Form). The Department noted that its current ACAA regulations permit airlines to require individuals traveling with service animals on a flight segment that is longer than eight hours to provide documentation that the animal will not need to relieve itself or can relieve itself in a way that does not create a health or sanitation risk. The Department noted that the current rule did not set a uniform method for such documentation or assurances. The Department proposed to amend this requirement by allowing airlines to require passengers traveling on flights eight hours or longer to submit to airlines a standardized DOT document. The Relief Form would require the service animal user to check a box attesting that either: (1) The animal will not need to relieve itself on the flight; or (2) the animal can relieve itself on the flight in a way that does not pose a health or sanitation issue (with a description of that method). The form also requires the service animal user to attest to an understanding that the airline may charge passengers with disabilities traveling with a service animal for the cost to repair damage caused by the passenger's service animal, so long as the airline charges passengers without disabilities for similar kinds of damage. The Department sought comment on the general content of the Relief Form, and whether the form would serve as adequate proof to verify that a passenger's animal would not need to relieve itself on flight segments of eight or more hours, or could relieve itself in a way that does not create a health or sanitation issue.

Comments Received

The Relief Form was opposed by almost half of individual commenters, all disability advocacy organizations, and certain airline organizations. Advocates who opposed the Relief Form raised many of the same arguments that they raised with respect to the other forms the Department proposed in the NPRM. Certain advocates also argued that the form was unnecessary because there are only a few domestic flight segments longer than eight hours.

A4A argued that the Relief Form should not be required for flight segments over eight hours.[130] A4A took the view that it is impossible for an animal to relieve itself in a sanitary manner onboard a flight; therefore, passengers should not be given the option of making this attestation. According to A4A, ''airlines would instead rely on training and communication with those passengers to facilitate elimination when needed,'' for example, by encouraging passengers to take shorter flight segments.[131] American Airlines urged the Department to forgo the Relief Form because doing so would reduce burdens on passengers.[132] Similarly, Air Canada also commented that the Relief Form should not be an option because it does not believe that animals can relieve themselves without creating a health or sanitation issue in a confined space such as an aircraft.[133]

Proponents of the Relief Form included a majority of individual commenters, and a number of industry commenters, including Spirit Airlines, Allegiant Air, and AAPA.[134] Proponents argued the benefits of having a uniform means of assurance that the animal would not relieve itself onboard the aircraft, or could do so in a sanitary manner, rather than a process that allows service animal users to submit various types of documentation to explain their animal's relief functions.

DOT Response

The Department has decided to retain the Relief Form largely as proposed. The Relief Form will remain a separate document, in recognition of the fact that it will be used only for those rare flight segments that are scheduled for longer than eight hours. The Department is of the view that the Relief Form does not impose significantly greater burdens on passengers with disabilities than the prior service animal rule. The prior rule also allowed airlines to require passengers to provide documentation for flights longer than eight hours that a service animal would not need to relieve itself on the flight, or that the animal can relieve itself in a way that does not create a health or sanitation issue on the flight. However, the prior rule did not specify what type of documentation was permissible. This final rule effectively standardizes the Relief Form documentation. The content of the Relief Form has been modified slightly in this final rule in the following ways: (1) Data fields have been added for the animal's name, the date of the flight, and the estimated length of the flight; (2) the language has been simplified for ease of comprehension; and (3) fraud warnings appear in a format that matches the fraud warnings of the new combined Air Transportation Form.

In response to A4A's comment that the Relief Form ''should not be required'' for flights over eight hours, we observe that the Department allows airlines to require passengers traveling on flights eight hours or more to produce this form—airlines are free to accept a service animal for transport on a flight segment over eight hours without providing the Relief Form. However, if an airline chooses not to require the form, the airline is not free to deny transport to a service animal on flight segments longer than eight hours based on concerns about the animal's elimination functions. In such situations, the airline may require the passenger to fill out the Relief Form as a condition of travel for flight segments longer than eight hours.

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[130] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[131] *Id.*

[132] Comment from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138.*

[133] Comment from Air Canada, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328.*

[134] Comments from Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221, Allegiant* Air, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19164, and AAPA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19323.*

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it deplays a valid OMB control number. The OMB control number for this information collection is _____.

Warning: It is a Federal crime to make materially false, fictitious, or fraudulent statements, entries, or representations knowingly and willfully on this form to secure disability accommodations provided under regulations of the United States Department of Transportation (18 U.S.C. § 1001).

United States Department of Transportation Service Animal Relief Attestation Form

Service Animal Handler's Name_____ Phone: _____

Service Animal User's Name (if different Handler): _____ Phone: _____

Email: _____

Animal's Name: _____ Estimated Flight Length: _____

Flight Date: _____ Departure Airport:_____ Arrival Airport: _____

Check one or both boxes:

☐ _____will not need to relieve itself while on the aircraft.
[Insert Animal's Name]

☐ _____can relieve itself on the aircraft without creating a health/sanitation issue.
[Insert Animal's Name]

Describe how _____ will refrain from relieving itself, or relieve itself without posing a health/sanitation issue (e.g., the use of a dog diaper):
[Insert Animal's Name]

_____

_____

☐ I understand that if _____causes damage, then the airline may charge me for the cost to repair it, as long as the airline would also charge passengers without disabilities to repair the same kind of damage.
[Insert Animal's Name]

☐ I am signing an official document of the U.S. Department of Transportation. My answers are true to the best of my knowledge. I understand that if I knowingly make false statements on this document, I can be subject to fines and other penalties.

Signature of the handler: _____Date: _____

BILLING CODE 4910–9X–C

D. Federal Crime Notification

The NPRM

In the NPRM, the Department provided samples of all three proposed forms. Each form contained the following statement, in small print at or near the top of the form: ''It is a Federal crime to make materially false, fictitious, or fraudulent statements, entries, or representations knowingly and willfully on this form to secure disability accommodations provided under regulations of the United States Department of Transportation (18 U.S.C. 1001).'' In addition to that standard notice, the Department's proposed Behavior and Training Form would have also required the service animal user to check a box stating: ''I understand that I am committing fraud by knowingly making false statements to secure disability accommodations provided under regulations of the U.S. Department of Transportation.'' The proposed Health Form (which was proposed to be filled out by the veterinarian) and the Relief Form did not have similar check-boxes indicating an awareness of the consequences of falsification. The Department sought comment on whether the forms adequately educate passengers on the seriousness of falsifying the forms.

Comments Received

The Department received a range of responses to the Federal crime notification. Airlines and airline organizations generally supported the use of DOT forms with Federal crime notifications on the ground that users may be less likely to falsify a Federal form. Various industry commenters urged the Department to add stronger and more detailed warning language. A4A and IATA also urged the Department to establish specific and clear procedures for how airlines can report incidents of fraud with respect to service animal documentation.[135] According to A4A, airlines do not have the ability to combat documentation fraud.[136] A4A and Asiana argued that the deterrent effect of the warning would be stronger if DOT specified the penalties for the violations.[137] Allegiant argued that the crime warning itself should be made more prominent on each form.[138]

Certain advocacy organizations, such as ADI–NA and Service Dogs of Virginia, also commented that DOT should specify the penalty for lying on the Behavior and Training Form;[139] similarly, ACB-California commented that ''there must be a significant penalty for deception,'' such as a fine or placing the individual on a no-fly list.[140]

ANA argued that the Department has the statutory authority to impose civil penalties of up to $1,466 on individuals who breach certain regulations governing passenger conduct.[141] ANA urged the Department to cite this authority on the forms, and to establish procedures by which airlines may report issues of documentation fraud to the DOT or the DOJ.[142] Similarly, Asiana Airlines commented that ''appropriate civil penalties administered by DOT may be a more effective and efficient deterrent to false statements,'' because actual imposition of criminal penalties is unlikely.[143]

The National Multiple Sclerosis Society and the Autistic Self Advocacy Network urged the Department to revise the forms so that they are more easily understood by individuals with cognitive or developmental disabilities.[144] Both organizations specifically urged the Department to reword the final entry on the Behavior and Training Form, relating to fraud.[145]

DOT Response

The Department agrees that the warning relating to penalties under 18 U.S.C. 1001 should be made more prominent; thus, we have increased the font size of the warning on both the Air Transportation Form and the Relief Form. We also agree that the final check-box on the finalized Air Transportation Form should reflect the warning in plain language so that passengers are able to comprehend the risk of falsifying information on the form. The final entry now reads: ''I am signing an official document of the U.S. Department of Transportation. My answers are true to the best of my knowledge. I understand that if I knowingly make false statements on this document, I can be subject to fines and other penalties.'' We have added this entry to the Relief Form as well. In general, we have strived to ensure that all the entries on the revised forms are easy to understand and to answer, especially because of the risk of Federal fines and penalties.

If an airline suspects instances of documentation fraud, the airline may notify the Office of Aviation Consumer Protection at *safalsestatementreports@dot.gov* to report such incidents and provide evidence supporting the airline's belief. The Office plans to refer these reports to the Department's Office of the Inspector General, as appropriate, for investigation and prosecution. The Department's Office of Aviation Consumer Protection does not have the authority to assess fines or other penalties on passengers who make false statements based on the Air Carrier Access Act or a regulation prescribed under that Act.[146]

The Department finds it unnecessary to describe this process on the form itself because it is more relevant to the airline than to the user filling out the form. We also do not, at this point,

[135] Comments from and A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240,* and IATA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

[136] Comments from and A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[137] Comment from Asiana Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19340.*

[138] Comment from Allegiant Air, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19164.*

[139] Comments from ADI–NA, https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915, *and Service Dogs of Virginia, https://beta.regulations.gov/document/DOT-OST-2018-0068-32397/.*

[140] Comment from the California Chapter of the American Council of the Blind (ACB California) at *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19145.*

[141] Comment from ANA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19025,* citing 49 U.S.C. 46301 and *In re Wallesa,* FAA Order 2013–2 (May 14, 2013), available at *https://www.faa.gov/about/office_org/headquarters_offices/agc/practice_areas/adjudication/civil_penalty/CaseFile/view/2013/2013-2.pdf.* Section 46301(a)(1)(A)(i) and (ii) authorize civil penalties of up to $1,466 on individuals who violate the ACAA (49 U.S.C. 41705) or a regulation prescribed or order issued under the ACAA.

[142] Comment from ANA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19025.*

[143] Comment from Asiana Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19340.*

[144] Comments from the National Multiple Sclerosis Society, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19168,* and the Autistic Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.*

[145] Comments from the National Multiple Sclerosis Society, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19168,* and the Autistic Self Advocacy Network, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19232.* Both organizations point out that as written, the proposed form appears to ask the individual with a disability to admit that the individual is committing fraud. The form stated: ''*I understand that I am committing fraud* by knowingly making false statements to secure disability accommodations provided under regulations of the U.S. Department of Transportation.'' (emphasis added).

[146] 49 U.S.C. 46301 permits the Department to impose civil penalties against those entities that violate certain statutory provisions or regulations prescribed under those statutory provisions. The Air Carrier Access Act, upon which final rule is based, requires U.S. and foreign air carriers to provide nondiscriminatory service and does not impose obligations on passengers. A passenger's submission of false information to an airline could therefore not support a civil penalty by the Department under 49 U.S.C. 46301.

believe that it is necessary to add greater detail to the forms about the types of fines or penalties that may arise from potential violations of 18 U.S.C. 1001. In our view, it is sufficient to impress upon users that they are filling out a Federal form and that they may be subject to fines or penalties if they knowingly falsify the forms.

E. Documentation Procedures

The NPRM

In the NPRM, the Department proposed various procedures relating to submitting and processing service animal documentation. Regarding timing, the Department proposed to allow airlines to require that the Health Form be ''current,'' *i.e.,* signed within one year of the date of the passenger's scheduled initial flight. The Department sought comment on whether one year is too long or too short for the form to be considered valid. The Department did not specify a timeframe for the proposed Behavior and Training Form or the Relief Form.

Also, the Department's proposal would have expressly prohibited airlines from requiring additional documentation from service animal users beyond the three DOT forms identified in the proposed rule. It proposed that copies of these three forms be kept at each airport that a U.S. carrier serves and at each airport a foreign air carrier serves a flight that begins or ends at a U.S. airport. It also proposed to require that airlines with a website make blank forms available on its website in an accessible format and to mail blank copies of the forms to passengers upon request.

Recognizing that the forms may impose a burden on those individuals traveling with traditional service animals who currently do not provide documentation, the Department sought comment from the public on ways to reduce the burden that the Department's service animal forms would have on passengers with disabilities. The Department solicited comment on whether to allow airlines to require the form each time a service animal user travels, and what medium airlines should be allowed to use to provide and collect the forms (*e.g.,* hardcopy, electronic).

Comments Received

The Department received a variety of comments from both advocates and airlines on its proposal that the service animal forms be kept at each airport that a U.S. carrier serves, at each airport a foreign air carrier serves a flight that begins or ends at a U.S. airport, and on airlines' websites. [147] Allegiant Air commented that it does not object to making DOT forms available on its website and at each airport served.[148] However, A4A and Air Canada commented that DOTs regulations should allow airlines to accept DOT forms electronically, rather than requiring airlines to accept paper forms received at the airport or printouts from an airline's website.[149] Some disability advocates such as ADI–NA, the Guide Dog Foundation, and Service Dogs of Virginia recommended that if DOT were to allow airlines to require passengers to submit DOT forms, passengers with disabilities should be permitted to provide the requested information using a check-box format during the reservation process to decrease the burden on passengers with disabilities traveling with service animals.[150] PVA and Psychiatric Service Dog Partners also commented that the burden on individuals with disabilities could be further reduced if airlines had the ability to attach a passenger's attestation to the passenger's frequent flyer or other appropriate travel record so that service animal users would not have to fill out DOT forms each time they travel.[151] ANA also commented that some information provided by the passenger to the airline on the DOT forms could be linked to the passenger's frequent flyer account.[152] Psychiatric Service Dog Partners also commented that the Department should amend the proposed regulatory text to clarify that carriers do not have to require DOT's forms, but should they require the forms, they should follow the procedural guidelines set forth in the rule, such as making the forms available at each airport an airline serves.[153]

Regarding the issue of whether airlines should be permitted to reject service animal documents that are stale (*e.g.,* dated more than one year before the date of travel), the comments that we received on this issue tended to center on the Health Form, because, as proposed, a veterinarian would have been required to fill out the form. The American Kennel Club and Hope Service Dogs agreed with the Department's proposal that its DOT Health Forms should be valid for a period of one year because the forms can be readily completed during the service animal's annual physical.[154] Similarly, A4A commented that if the Department finalizes its proposed Health Form, it supports ''DOT's proposal that the form be deemed valid for one year from the date of issuance, but no longer than the date of expiration of the animal's rabies vaccine.'' [155] ADI–NA, however, commented that DOT's proposal that its Health Form be valid for one year is too short given that ''[s]tatistically, more dogs are vaccinated for rabies with a three-year vaccine and requirements vary in each state.'' [156] ADI–NA also noted that if airlines were permitted to use a ''check box in the reservation process attesting that the service animal is current on its rabies vaccination,'' the issue of the duration of the form, one-year vs. three-years, goes away.[157]

As for the Department's proposal that airlines may only require the DOT service animal forms as a condition of travel, IATA, AAPA, and individual foreign airlines pointed out that foreign governments may impose their own service animal requirements (including additional forms and breed restrictions). IATA commented that ''all forms should make it clear that it is the sole

[147] PRM proposes that the service animal health form and the service animal behavior and training attestation form commonly used by carriers (as well as the service animal relief attestation form, where applicable) be DOT-designed documents that carriers would be required to accept; carrier-designed forms would be prohibited. Carriers would be required to make the DOT forms available on their websites and at each airport served. Allegiant does not object in principle to these proposals but submits that the forms are in need of improvement to deter fraud and abuse by unscrupulous passengers.

[148] Comment from Allegiant Air, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19164.*

[149] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240, and Air Canada, https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328.*

[150] Comments from ADI–NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915,* the Guide Dog Foundation, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18141,* and Service Dogs of Virginia, *https://beta.regulations.gov/document/DOT-OST-2018-0068-32397/.*

[151] Comments from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19348,* and Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

[152] Comment from ANA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19025.*

[153] Comment from Psychiatric Service Dog Partners, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17092.*

[154] Comments from American Kennel Club, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19163,* and Hope Service Dogs, Comment from Hope Service Dogs, Inc., *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18702.*

[155] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[156] Comment from ADI–NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915.*

[157] Comment from ADI–NA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-17915.*

responsibility of the passenger to comply with any and all applicable foreign laws, regulations, and paperwork requirements when traveling with their dog internationally.'' [158]

DOT Response

This final rule permits airlines to require that the DOT Air Transportation Form (*i.e.,* combined one-page health, behavior and training form) be completed for each trip but not each time a service animal user travels.[159] This means that a service animal user cannot be required to complete the form more than once if he or she purchased a round-trip ticket, as that would be considered one trip. The final rule also allows carriers to require that the service animal forms be current, which it defines as forms completed by the passenger on or after the date that the passenger purchased his or her ticket.

DOT recognizes that some commenters indicated their preference for attaching a record of the passenger's service animal attestation to the passenger's frequent flyer or other travel profile to eliminate the burden of a service animal user's having to fill out these forms each time the passenger travels. However, the Department believes that its decision to allow airlines to request and review up-to-date health and behavior information from a service animal user on each trip strikes the right balance as airlines can ensure that a service animal has not behaved aggressively or caused injury toward others, and that the animal has current vaccinations, each time the animal travels on an aircraft. The Department is also concerned with the potential privacy implications of airlines' permanently storing and maintaining a record of the passenger's service animal attestation to the passenger's frequent flyer or other travel profile without the passenger's consent.

Furthermore, the Department understands that foreign airlines are concerned with the proposed prohibition against airlines' requiring passengers to provide additional service animal documentation, beyond those specified by the Department, as a condition of travel. These commenters emphasized that foreign governments may impose additional restrictions and requirements on transport of service animals. This final rule permits airlines to refuse transportation to a service animal if its transport would violate the health or safety laws or regulations of a foreign government.[160] Elsewhere, the rule also states that airlines may impose additional restrictions on the transport of service animals if required by a foreign carrier's government.[161] Nevertheless, we are persuaded that it is also appropriate to add language explicitly stating that carriers may require additional service animal documentation to the extent it is required by foreign governments or domestic territories.[162]

Regarding the medium by which airlines are permitted to provide and accept the DOT service animal forms, the Department is requiring airlines that mandate completion of these forms by service animal users to provide the forms at each airport that a U.S. carrier serves, at each airport a foreign air carrier serves a flight that begins or ends at a U.S. airport, on airlines' websites, and by mail upon request. Airlines must provide passengers the option of submitting the completed form(s) electronically or by hardcopy if submitted in advance of the passenger's travel date. Several commenters indicated their preference for DOT to allow airlines to request the attestation in DOT's Air Transportation Form via a check-box system during the reservation process to decrease the burden on individuals with disabilities. DOT rejected this format because allowing passengers to attest to their animal's good behavior, training, and good health on an airline's website, rather than on an official Federal form, diminishes the use of the form as a potential fraud deterrent as airlines would not be permitted to include language warning service animal users that it would be a Federal crime, in violation of 18 U.S.C. 1001, to make false statements or representations to secure disability accommodations.

4. Number of Service Animals per Passenger

The NPRM

In the NPRM, the Department proposed to allow carriers to limit the number of service animals traveling with a single passenger with a disability to no more than two service animals. The Department also sought comment on whether there were any safety-related risks that could arise from allowing a passenger to transport two service animals as opposed to just one service animal.

Comments Received

Most disability rights advocates commented that airlines should be required to allow at least two service animals to travel with a single passenger if needed. Advocates reasoned that some individuals have multiple disabilities and that while some animals have been trained to perform multiple tasks, some individuals with disabilities may need animals that are focused on mitigating a specific disability for the mitigation to be effective. Advocates also noted that a passenger with a severe disability that requires around-the-clock assistance may require two service animals as the animals would take turns providing the individual assistance. Some advocates encouraged the Department to consider requiring airlines to transport more than two service animals. These advocates noted that passengers may have a legitimate reason for needing more than two service animals, and they should be permitted to carry more than two provided that they can explain why more than two service animals are needed.

The majority of airlines, however, commented that they should be permitted to limit the number of service animals traveling with a passenger to one service animal. These airlines argued that allowing just one service animal per passenger helps support safety and would help to avoid disruptions in the cabin. Airlines also argued that given the space afforded to individual passengers on aircraft, transporting more than one service animal could be problematic. Airlines also noted that one service animal could be trained to perform multiple tasks.

DOT Response

The Department finalizes, as proposed, a provision that allows carriers to limit the number of service animals traveling with a single passenger with a disability to no more than two service animals. The Department acknowledges comments from disability rights advocates that certain individuals with disabilities require more than one service animal, and while a single service animal may be trained to perform more than one mitigating function, more than one service animal may be needed to assist an individual on the aircraft or at the passenger's destination if the passenger uses the animals for lengthy periods of time (*e.g.,* if one animal may need a break from work). Furthermore, disability advocate commenters noted that while a service animal may be trained to assist an individual with

[158] Comment from IATA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

[159] Airlines may require that the Relief Form be completed for each flight segment scheduled to take 8 hours or more.

[160] 14 CFR 382.79(a)(3); see also 14 CFR 382.7(g).

[161] 14 CFR 382.80.

[162] 14 CFR 382.75.

multiple disabilities, a passenger's animal may need to focus on mitigating one disability at a time for the mitigation to be effective, so multiple animals may be needed at once. Although the Department understands that there may be instances where multiple service animals may be needed to accommodate an individual's disability given space constraints on the aircraft, the Department has concluded that it is appropriate to allow airlines to limit the number of service animals to two per passenger with a disability, although airlines are certainly free to allow a passenger to travel with more than two service animals if the airline wishes to do so. For those passengers who seek accommodation for two service animals, the airline would be permitted to require the passenger to complete two separate attestation forms, one for each animal, to verify that each qualifies for appropriate accommodation as a service animal to accompany the passenger on the flight.

In response to the carriers' argument regarding the lack of space in the cabin to accommodate a passenger traveling with two service animals, the Department notes that this final rule allows airlines to limit the space that a passenger's service animal or animals may occupy to the passenger's lap and foot space. While they are not required to do so, airlines may wish to provide an individual with two service animals with additional space, but airlines would also be free to require that both service animals fit into the individual's allotted space without encroaching into the space of another passenger. Under this final rule, airlines may refuse transportation to the animals in the cabin if the animals would not safely fit in the passenger's lap or foot space. Requiring airlines to accommodate up to two service animals per passenger ensures that individuals with a disability who rely on more than one service animal are properly accommodated. And because both service animals would be trained to do work or perform tasks, the service animal handler should have no difficulty controlling both service animals onboard the aircraft.

5. Advance Notice or In-Person Check-In

The NPRM

In the NPRM, the Department stated that it would prohibit airlines from requiring individuals traveling with a service animal to provide the DOT-issued forms in advance of the passenger's flight because of concerns that it would prevent travel by passengers with disabilities wishing to make last minute travel plans that may be necessary for work or family emergencies.[163] Instead of advance notice, the Department proposed to allow airlines to require passengers to check in physically at the airport in advance of the check-in time for the general public. More specifically, the Department proposed to allow airlines to require service animal users to check in at the airport one hour before the check-in time for the general public to observe the service animal and process service animal documentation, so long as the airline similarly requires advance check-in for passengers traveling with their pets in the cabin. The NPRM proposed to permit airlines to require that the check-in take place at any designated airport location, including the terminal lobby.

To address the concern that service animal users may be potentially inconvenienced with long waits when physically checking in at the airport because they would not have the benefit of checking in electronically before arriving at the airport like other passengers, DOT also proposed to require airlines to make an employee trained to handle disability-related matters available in person at the airline's designated airport location where the service animal could be observed and the service animal documentation review and passenger check-in could occur promptly. The Department also proposed to require airlines to try to accommodate passengers who fail to meet the one hour check-in requirement so long as the airline can do so by making reasonable efforts without delaying the flight.

The Department sought comment on each of these proposals and specifically whether one hour before the general public check-in would provide sufficient time for airline personnel to process service animal documentation.

Comments Received

The Department received approximately 400 comments on this proposal. The disability rights advocates, including ACB, AFB, America's Vet Dogs, ADI–NA, Canine Companions for Independence, the DREDF, Guide Dog Users of Canada, the Empire State and Florida, PVA, and individual commenters, all of which make up the majority of the disability advocacy comments received on this issue, generally opposed DOT's proposal. These organizations argued that permitting airlines to require advance check-in would be unduly burdensome and discriminatory, would separate individuals with disabilities from their loved ones and travel companions, and would single out passengers with disabilities at the airport. They also argued that this process would prevent such passengers from utilizing curbside, online, or mobile check-in, or from bypassing the airport check-in lobby and going straight to the security check point if not checking a bag, as passengers who are not traveling with service animals are able to do.

Commenters argued that guide dogs have a long record of safe travel, and that a lengthier check-in process for persons with disabilities who use service animals would preclude blind guide dog users from making emergency or impromptu trips. They also stated that the proposed requirements could significantly hinder blind business travelers from carrying out the necessary duties of their employment. ACB commented that because air travelers are already required to arrive at the airport far before the take-off of their flight, requiring a person with a disability with a service dog to come even earlier is discriminatory.[164] ACB further commented that this requirement would single service animal users out and cause undue anxiety.[165] America's VetDogs agreed this proposal would cause an unjust burden on individuals with disabilities that use service dogs that the general public does not have to endure, and stated further that such a requirement could cause individuals traveling with service animals to be separated from their travel party.[166] Other commenters argued that permitting airlines to require early check in could pose particular challenges for individuals with psychiatric illnesses, such as Post-Traumatic Stress Disorder, because those individuals are already uncomfortable in crowds and asking them to come to the airport earlier and remain in a crowd places an undue burden on them. PVA commented that

[163] Part 382 generally prohibits airlines from requiring advance notice as a condition of providing disability accommodations, unless the rule specifically permits advance notice. *See* 14 CFR 382.27(a). The existing service animal rule did specifically permit airlines to require passengers to provide 48 hours' advance notice for transportation of an emotional support or psychiatric service animal in the cabin, and for transportation of a service animal on a flight segment scheduled to take 8 hours or more. *See* 14 CFR 382.27(c)(8) and (c)(9).

[164] Comment from American Council for the Blind, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18365.*

[165] *Id.*

[166] Comment from America's VetDogs, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18138.*

it opposes a rule that would permit airlines to require advance airport check-in.[167] In PVA's view, if the training and behavior attestation and health forms are required, then the only processing that should be required is a quick review to ensure that the forms are completed properly; additional time should not be needed to observe the animal.[168] One individual commenter also noted that a one-hour advance check-in requirement would have an adverse effect on the service animals themselves. The commenter stated that a requirement that a passenger with a service animal check in earlier will prevent service animal users from utilizing benefits such as curbside and online/mobile check-in that other travelers enjoy, increase the time that the service animal will be unable to relieve itself, and will cause additional anxiety for the service animal handler to ensure the comfort of the animal and to locate a service animal relief area.[169]

Most disability advocacy organizations that opposed both DOT's proposed early check-in and DOT's documentation proposal, including the New York State Bar Association Disability Rights Committee and PVA, commented that if DOT permits airlines to require documentation against its wishes, it would be in favor of DOT's proposal to require airlines to make an employee trained in disability-related matters available to process service animal documentation promptly.[170]

Airlines were split in their support for the one-hour check-in proposal, given the cost associated with ensuring that a dedicated airline employee would have space at the airport and would be available to assist the passengers with the check-in process. Most, if not all, airlines expressed their preference for allowing airlines to collect service animal documentation up to 48 hours in advance. These airlines reasoned that allowing airlines to require passengers to provide the forms in advance, rather than check in at the airport one hour early, would be less burdensome for passengers, and would give airlines ample opportunity to review the documentation and, if needed, provide the passenger time to correct the documentation before the passenger's flight.

The AAPA stated that it supports the Department's advance check-in proposal, but suggested that airlines should be allowed to designate service contractors, such as trained ground handling agents, to process service animal documentation.[171] AAPA also commented that advance notice would allow airlines to assist passengers to plan in advance for the transport of a service animal, which is particularly important on long international journeys involving multiple airports.[172] Both A4A and IATA indicated that they support the one-hour check-in requirement, but urged the Department to consider adopting a requirement that would allow them to require the DOT forms 48 hours in advance of the date of the flight.[173] Those organizations indicated that some airlines would like to avoid or minimize the need for early in-person check-in for service animal users, if at all possible, because some airlines may have difficulty making the requisite personnel available promptly or reserving a check-in location at an airport due to space constraints. A4A commented that a 48-hour advance notice requirement was appropriate ''so that airlines will be better able to validate that a passenger's dog is trained to do work or perform a task, and will behave appropriately during air travel since airlines anticipate that the fraud will migrate to the PSA category.'' [174]

A number of airlines expressed support for a requirement that would allow airlines to require DOT forms 48 hours in advance, rather than requiring service animal users to check in at the airport one hour in advance. American Airlines and Air Canada indicated that they opposed the one-hour advance check-in requirement in favor of a requirement that airlines be allowed to require DOT forms in advance of travel.[175] Similarly, Spirit Airlines and Allegiant Air commented that a 48-hour advance notice requirement would benefit both airlines and passengers because this timeframe allows forms to be reviewed and corrected if necessary without passengers' suffering the inconvenience of waiting in line early at the airport.[176] Furthermore, ANA urged the Department to allow airlines to mandate that passengers furnish any applicable international travel documentation 48 hours in advance.[177] With respect to DOT's concern that advance notice would preclude passengers with disabilities from traveling on short notice, ANA commented that special provisions could be made for those cases, such as allowing the forms to be presented at the check-in counter.[178] Open Doors commented that it ''does not support any advance notice or submission requirements,'' with respect to service animal documentation.[179] Similarly, PVA commented that it supports ''prohibiting carriers from requiring that the forms be provided prior to the date of travel to minimize additional burdens on passengers with disabilities who use service animals.'' [180]

DOT Response

The Department has considered the merits of the arguments for and against the proposed provision to permit airlines to require individuals with disabilities who use service animals to check in one hour before the check-in time at the airport for the general public, and we are persuaded that the Department should not adopt such a rule. We are aware that many airlines allow passengers to check in electronically before arriving at the airport, and among the benefits of electronic check-in is the ability to skip the airport lobby check-in area and proceed directly through security to the gate. It is the Department's view that a one-hour advance check-in requirement would impose significant inconvenience on passengers with disabilities while not providing airlines with an efficient or effective method for reviewing the documentation. Accordingly, the Department has revised the final rule to prohibit airlines from requiring that passengers traveling with service animals physically check in at the

[167] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19348.*

[168] *Id.*

[169] Comment from Ginger G.B. Kutsch, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19306.*

[170] Comments from New York State Bara Association Disability Rights Committee, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-20160,* and PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19348.*

[171] Comment from the AAPA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19323.*

[172] *Id.*

[173] Comments from and A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240,* and IATA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19041.*

[174] Comment from and A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[175] Comments from American Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19138;* and Air Canada, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19328.*

[176] Comments from Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221,* and Allegiant Air, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19164.*

[177] Comment from ANA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19025.*

[178] *Id.*

[179] Comment from Open Doors Organization, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19305.*

[180] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19348.*

airport lobby solely on the basis that the passenger is traveling with a service animal. This change will ensure that service animal users are not prevented from enjoying the same convenience-related benefits provided to other passengers, such as online and curbside check-in.

Rather than allowing airlines to require advance check-in, the Department is permitting airlines to require that individuals traveling with a service animal provide documentation up to 48 hours in advance of the time of departure, depending on when the passenger's reservation was made. The Department is now of the view that a 48-hour advance notice provision is appropriate. We are persuaded that this provision would benefit both airlines and consumers by allowing the forms to be processed more efficiently, without requiring passengers to wait in line at the airport one hour in advance. The provision also provides airlines a greater opportunity to assist passengers with service animals, and more time to reach out to the passenger if the documentation is incomplete or deficient (*e.g.,* if the service animal's rabies vaccination expires before the flight date).

In the NPRM, we expressed concern that a 48-hour advance notice provision would pose a significant burden on passengers with service animals who wish to travel on short notice. Accordingly, the final rule now has an exception for reservations that are made less than 48 hours in advance of travel. In those situations, airlines may not require the documentation in advance and must allow the forms to be presented at the passenger's departure gate on the date of travel. The final rule also includes a grace provision, explaining that if a passenger fails to meet the airline's advance notice requirements, then the airline must still make the accommodation if it may do so by making reasonable efforts, without delaying the flight. This grace provision is already set forth in the Department's ACAA regulations relating to advance notice generally,[181] but will be repeated in the service animal subpart as well.

6. Service Animal Identification

The NPRM

In the NPRM, the Department described three means by which airline personnel may determine that an animal is a service animal at the airport. First, we proposed that airlines may ask whether the animal is required to accompany the passenger because of a disability and what work or task the animal has been trained to perform. The proposed rule added that airlines may not ask about the nature and extent of the person's disability, or ask that the service animal demonstrate its work or task. Next, the Department proposed that airline personnel may observe the behavior of the animal in the cabin or the gate area. The proposed rule explained that if an animal engages in disruptive behavior (such as running freely, barking or growling repeatedly, biting, jumping on people or animals, injuring people or animals, urinating, or defecating), then it has shown that it has not been properly trained to behave in public, as is expected of a service animal. Third, the Department proposed that carriers may look to ''physical indicators'' to determine whether the animal is a service animal. Specifically, we proposed that airline personnel may look for the presence of a harness, vest, or other indicator that the animal is a service animal.

Comments Received

Disability Advocates mainly responded to the Department's proposals regarding the ways in which an airline can identify a service animal's status. Guide Dog Users of Canada and Service Dogs of Virginia expressed their support for DOT's proposal to allow airlines to ask passengers if (1) a service animal is required because of a disability, and (2) what work or task has the animal been trained to perform.[182] Similarly, ACB commented in support of DOT's proposal to allow airlines to ask the same two questions that DOJ permits regulated entities to ask service animal users in order to confirm the animal's status. ACB commented that dog users would be able to answer the two necessary questions easily and appropriately to identify their dogs as service animals, which will ease the enforcement burden for airlines and their employees.[183]

With respect to relying on the animal's behavior as an indicator of the animal's status, many disability rights advocates expressed strong opposition to the notion that an airline could determine that an animal is not a service animal if the animal misbehaves. The Oklahoma Law Center commented that it ''strongly opposes DOT's proposal that if a service animal is out of control, [it] would allow 'airlines to determine that the animal is not a service animal.' '' [184] The Oklahoma Disability Law Center further states that ''[s]ervice animals are always service animals . . . [but] if a service animal cannot control its elimination functions because the service animal is ill or the service animal is uncontrollably barking or otherwise misbehaving because it was provoked by something or someone, the airlines are permitted to bar travel on a particular flight until the service animal is under control.'' [185] Similarly, Service Dogs of Virginia also commented that ''[i]f a service animal behaves inappropriately (*e.g.,* barking excessively, growling, snapping, toileting indoors, stealing food from tables, other passengers or the floor), the airport and airline personnel may ask the service animal user to remove the dog regardless of its status as a service animal.'' [186]

One disability advocacy organization, however, disagrees with the Department's proposal that airlines should also consider physical indicators, such as vests, harnesses, etc., when trying to decide an animal's status. Hope Service Dogs, Inc. commented that DOT's regulation should never permit airlines to look at vests, harnesses, certificates, and identification badges as proof that a dog is a trained service dog because a service dog only requires a plain collar or a harness and a regular leash.[187]

DOT Response

The Department has carefully considered all of the comments and decided to allow carriers to determine if an animal is a service animal that must be accepted for transport by: (1) Asking whether the animal is required to accompany the passenger because of a disability and what work or task the animal has been trained to perform; [188]

[181] See 14 CFR 382.27(g).

[182] Comments from Guide Dog users of Canada, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18917,* and Service Dogs of Virginia, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-32397.*

[183] Comment from American Council for the Blind, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18365.*

[184] Comment from the Oklahoma Disability Law Center, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19237.*

[185] Comment from the Oklahoma Disability Law Center, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19237.*

[186] Comment from Service Dogs of Virginia, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-32397.*

[187] Comment from Hope Service Dogs, Inc., *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18702.*

[188] This approach differs from DOJ's ADA regulations, which prohibit asking these questions if it is ''readily apparent that the animal is trained to do work or perform tasks for the individual with a disability (*e.g.,* the dog is observed guiding an individual who is blind or has low vision, pulling a person's wheelchair, or providing assistance with stability or balance to an individual with an observable mobility disability).'' *See* 28 CFR 35.136(f); 28 CFR 36.302(c)(6).

(2) observing the behavior of the animal; and (3) looking at physical indicators such as harnesses and vests. In addition, the final rule specifies that carriers may use one or more of these factors to determine whether to accept an animal for transport as a service animal. However, as noted by commenters, the Department recognizes that unscrupulous individuals may purchase service animal paraphernalia such as vests or tags to make it appear that their pets are service animals. As such, carriers are free to view such paraphernalia as evidence that an animal is a service animal; conversely, they are also free to give the presence or lack of presence of such paraphernalia little weight.

7. Service Animal Restraints

The NPRM

The Department proposed to allow airlines to require service animals to be harnessed, leashed, or tethered unless the device interferes with the service animal's work or the passenger's disability prevents use of these devices. Under the proposal, in those circumstances, the carrier would permit the passenger to use voice, signal, or other effective means to maintain control of the service animal. This proposal is similar to the requirement in DOJ's rule implementing the ADA, which requires service animals to be harnessed, leashed, or tethered while in public places unless the device interferes with the animal's work, in which case the service animal must be otherwise under the handler's control (*e.g.,* voice control, signals, or other effective means).

Comments Received

Airlines, disability advocates, organizations, and individual commenters were unified in their support that the Department adopt a regulation allowing airlines to require service animals to be harnessed, leashed, tethered, or otherwise under the control of the service animal handler. Commenters generally recognized that a control requirement is especially crucial in the airport/aircraft environment given the often crowded, confined, and high-pressure nature of air transportation. Commenters emphasized that unrestrained service animals are dangerous and present a safety hazard by jeopardizing the safe transport of passengers, crew, and other animals.

Airlines commented that if harnessing, leashing, and tethering is appropriate for trained animals under the ADA, a similar requirement is appropriate for service animals on aircraft. However, although recognizing that DOT's proposal to permit the passenger to use voice, signal, or other effective means to maintain control of the service animal under certain limited circumstances properly aligned the ACAA regulations with DOJ's ADA rule, airline commenters questioned the use of voice commands in lieu of restraints. They argued that voice commands may not be an effective way to control a service animal, and supported restraints being used at all times while on the aircraft to ensure safety. These commenters argued that non-restraint methods are not effective measures of control in a noisy, confined aircraft environment, and reiterated that an uncontrolled animal in an aircraft cabin remains a threat for passengers, crew, and other animals. One disability advocate, Service Dogs of Virginia, agreed that voice commands are not sufficient in an airplane setting and argued that, even if the person with the disability is not able physically to hold a leash, tether, or harness, the service animal should still be under control by, for example, tethering it to the person's wheelchair.[189] Service Dogs of Virginia further commented that on an airplane, when the wheelchair is absent, the service animal can be tethered to the arm of the passenger's seat or remain lying down at the passenger's feet under the passenger's control, and such a requirement would minimize the likelihood of unwelcome or injurious behavior by a service animal to other passengers or airline staff.[190]

DOT Response

The final rule allows airlines to require service animals to be harnessed, leashed, or tethered at all times, even in instances where the device interferes with the service animal's work or the passenger's disability prevents use of these devices. The Department was persuaded by commenters who explained that non-physical means of control over the service animal, such as voice commands or signals, could implicate safety on an aircraft. The Department understands that this would be a departure from DOJ's rule implementing the ADA, which requires service animals to be harnessed, leashed, or tethered while in public places unless the device interferes with the animal's work, in which case the service animal must be otherwise under the handler's control (*e.g.,* voice control, signals, or other effective means); however, the Department believes that a deviation from DOJ's ADA rule is appropriate given that when the animal is traveling onboard an aircraft it will be in a tightly confined cabin space with numerous people in close proximity who are unable to leave the aircraft during flight. Under this final rule, if a passenger with a disability is unable to keep physical control over the service animal, even if the reason is related to the person's disability, the airline may deny transport of the animal in the cabin. A service animal user who is unable to keep physical control of the animal may choose to travel with a service animal handler, who would be responsible for maintaining control over the animal.

8. Denying Transportation to a Service Animal

The NPRM

In the NPRM, the Department proposed that a carrier may deny transport to an animal if it poses a direct threat to the health or safety of others. The proposed rule made explicit reference to the existing definition of ''direct threat'', which is defined as ''a significant risk to the health or safety of others that cannot be eliminated by a modification of policies, practices, or procedures, or by the provision of auxiliary aids or services.'' [191] The proposed rule also clarified that in making this determination, the carrier must make an individualized assessment based on reasonable judgment that relies on the best available objective evidence to ascertain the nature, duration, and severity of the risk; the probability that the potential injury will actually occur; and whether reasonable modifications of policies, practices, or procedures will mitigate the risk. The proposed rule also clarified that the carrier must not deny transportation to the service animal if there are means short of refusal that would mitigate the problem.

The Department also indicated that it would propose that ''carriers would be prohibited from refusing to transport a service animal based solely on breed or generalized physical type, as distinct from an individualized assessment of the animal's behavior and health.'' [192] We stated that ''[t]he Department's policy has been to require airlines to conduct individualized assessments of particular service animals based on the animal's evident behavior or health,

[189] Comment from Service Dogs of Virginia, *https://beta.regulations.gov/document/DOT-OST-2018-0068-32397.*

[190] *Id.*

[191] *See* 14 CFR 382.3.

[192] 85 FR 6452; see also Final Statement at 20–21 (carriers may not refuse transportation to a dog based solely on its breed).

rather than applying generalized assumptions about how a breed or type of dog would be expected to behave.'' [193] While we indicated that we would retain that policy in the proposed rule, the principle was inadvertently not reflected in the proposed regulatory text itself.

Next, the Department proposed that a carrier may deny transport to a service animal if it causes a significant disruption in the cabin or at an airport gate area, or if the animal's behavior indicates that it has not been trained to behave properly in public.[194] The Department proposed that if a carrier seeks to deny transport for these reasons, the carrier must engage in an individualized assessment as set forth in the rulemaking. As with considerations of direct threat, the carrier must not deny transportation to the service animal if there are means short of refusal that will mitigate the problem.

Third, the Department proposed that a carrier may deny transport to a service animal if the animal's carriage would violate FAA safety requirements or the safety requirements of a U.S. Territory or foreign government. In making this determination, a carrier would not be required to undertake the same individualized analysis that is necessary for direct threat or misbehavior (*i.e.,* with an assessment of the specific facts and circumstances relating to the animal, the risks involved, and means of mitigating the risk). Instead, it would be sufficient for the carrier to determine that transport of the animal would violate the safety requirements of a U.S. territory or foreign government.

Fourth, the Department proposed to allow airlines to require passengers to submit completed service animal forms as a condition of travel. However, the NPRM did not include the lack of such documentation in the proposed rule text listing the reasons a carrier may refuse to transport a service animal.

Finally, the Department proposed that if a carrier refused to transport an animal as a service animal based on any provision in Part 382, then the carrier must provide a written statement to the passenger setting forth the reasons for the refusal. This statement must be provided either at the airport itself, or within 10 days of the refusal of transportation.[195]

Comments Received

Commenters who addressed denying transport to service animals based on the animal's behavior, or after assessing the animal to determine whether the animal posed a direct threat, were largely in favor of the Department's proposal to require carriers to conduct an individualized assessment of the animal before deciding whether the animal should be denied transport. The AAAE commented that its members believe that requiring airlines to make decisions about an animal's behavior and health on a case-by-case basis before denying the animal transportation is an appropriate approach, rather than denying the animal transport on the basis of the animal's breed.[196] With respect to observed animal behavior, Spirit Airlines commented that airlines ''should be able to deny boarding to a service animal if an employee observes it misbehaving or showing aggression in an airport regardless of whether documentation requirements have been met.'' [197] Regarding the proposal to allow airlines to require DOT-issued service animal forms as a condition of travel, industry commenters, some individuals, and a few disability organizations were supportive while most disability organizations and individuals opposed the proposal as they believe that it would be unduly burdensome for passengers with disabilities, especially to those who had never been required to submit any type of documentation to travel with their service animal in the past.

DOT Response

The Department is adopting the proposal with a few revisions. The final rule retains the two reasons provided in the proposal to deny transport to a service animal with no change: (1) The animal poses a direct threat to the health or safety of others; and (2) the animal causes a significant disruption in the aircraft or at the airport. Regarding the third reason to deny transport to an animal, the final rule allows airlines to preclude transport of a service animal if doing so would violate applicable safety, health, or other regulations of a U.S. Federal agency, a U.S. territory, or a foreign government. The proposed rule mentioned safety regulations, but not health or other regulations. Further, the final rule has added a fourth reason to deny transport to a service animal, which is that the airline required the passenger to complete an Air Transportation Form or a Relief Form and the passenger failed to do so. The completion of the Air Transportation Form assists the airline in making an individualized assessment on whether the animal poses a direct threat to the health or safety of others, and the completion of a Relief Form provides assurances to the airline that the service animal would not urinate or defecate in the cabin.

In addition, the final rule clarifies that the individualized assessment analysis must be made independent of the animal's breed or type. For example, if the carrier determines that the animal is a pit bull, that fact, standing alone, would not be considered a proper basis on which to make an ''individualized assessment'' of any threat that the animal poses. Instead, the carrier would be required to base its assessment on observable, objective factors such as its behavior and health. This amendment reflects the intended scope of the rule as proposed and serves as a complement to the revised definition of a service animal, which indicates that a service animal is a dog, ''regardless of breed or type.''

9. Large Service Animals on Aircraft

The NPRM

In the NPRM, the Department proposed to allow carriers to require a service animal to fit within its handler's lap or foot space on the aircraft. If the service animal could not fit, the airline would be required to offer the passenger the opportunity to move to another location in the same class of service, if available, where the service animal could be accommodated.

Comments Received

The comments received by airlines almost uniformly supported the Department's proposal to adopt a rule that would allow carriers to require a service animal to fit within its handler's lap or foot space. Commenters who supported the Department's proposal argued that it ensures that other passengers seated near a service animal will not be discomforted by an animal's encroaching on their foot space and would provide a simple and clear standard for flight attendants to enforce. A4A supported the Department's adopting a performance-based standard that would allow airlines to devise the best, operationally feasible alternative, including but not limited to seating the passenger traveling with a service animal next to an empty seat within the

[193] *Id.* at 6454.

[194] This principle also appears in section 382.74, relating to the ways in which a carrier may identify that an animal is a service animal.

[195] The prior service animal rule had a nearly identical provision. See 14 CFR 382.117(g).

[196] Comment from AAAE, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19196.*

[197] Comment from Spirit Airlines, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19221.*

same class of service, if such a seat is available; providing the passenger with the option to transport the animal in the cargo hold, if possible; or offering to transport the passenger on a later flight with more room, if available.[198] Airlines mentioned that all passengers should enjoy a comfortable flight and should not be burdened with objecting if they feel uncomfortable sharing their foot space with a large service animal.

The comments received by disability advocates and the majority of individual commenters uniformly opposed the Department's proposal. These commenters argued that the Department's proposal is discriminatory because it denies access to those passengers traveling with large service animals and will dramatically impact those who use large service animals for mobility impairments. Disability advocates noted a potential financial hardship with the Department's proposal that an airline may require a passenger with a disability to purchase an upgrade, an additional seat, or switch to a later flight. Commenters argued that large service animals have been used for years, and are now only an issue since airlines have decreased space in economy seating. Disability advocates, such as PVA, argued that instead of limiting the size of service animals, the Department should amend its seating accommodation regulations to ensure improved access to seats with additional leg room for those individuals who use these animals.[199] Disability advocates argued that many large service animals, such as Great Danes and Mastiffs, are used to support passengers with challenges in balance (*e.g.,* Parkinson's Disease) or to pull a manual wheelchair, possess sufficient training to behave in the airport and airline setting, and should be accepted by airlines for travel inside the cabin regardless of their size. Further, the Disability Rights Education Fund and the Oklahoma Disability Law Center disagreed with airline assertions that passengers feel ''put upon'' by having to share space with service animals, arguing that these assertions are unfounded.[200]

DOT Response

After carefully reviewing the comments, the Department has decided to allow airlines to require that a service animal fit within the passenger's foot space on the aircraft or be placed on the passenger's lap. Passengers, including passengers with disabilities traveling with large service animals, are not entitled to more space than they purchased. While the Department is sensitive to the fact that many large service animals, such as German Shepherds, Golden Retrievers, and Labrador Retrievers, are commonly used to assist individuals with disabilities, particularly individuals with mobility impairments, these animals are often trained to fit into small spaces.[201] The Department further emphasizes that larger service animals are not automatically prohibited from an aircraft if they do not fit in their handler's foot space. The final rule continues to require carriers to accommodate such animals by moving them to another seat location within the same class of service where the animal can be accommodated, if available, such as a seat next to an empty seat on the aircraft, if available. If there are no alternatives available to enable the passenger to travel with the service animal in the cabin of the scheduled flight, airlines are also required to offer passengers the opportunity to transport the service animal in the cargo hold free of charge or travel on a later flight to the extent there is space available on a later flight and the transport is consistent with the safety requirements.

Passengers traveling with a large service animal also have the option to purchase an additional seat in advance to ensure that their large service animal is accommodated on the aircraft.

10. Damage Caused by Service Animals

The NPRM

In the NPRM, the Department proposed to permit airlines to adopt a policy in which the airline may charge a passenger with a disability for damage caused by his or her service animal, so long as the airline normally charges individuals without disabilities for similar kinds of damage caused by an animal traveling with a passenger.

Comments Received

Disability advocates expressed concern that, in practice, individuals with disabilities may be charged for damage caused by their service animals, while other passengers, who inflict similar types of damage, may not be charged. The National Disability Rights Network, Disability Rights Florida, Disability Rights New Jersey, and Oklahoma Disability Law Center, commented that DOT's damage provision is not justified ''unless airlines currently actually charge passengers without disabilities if they vomit on a seat or floor or break a tray table or cause any other damage to aircraft.'' [202] Similarly, the Disability Coalition (New Mexico) commented that if DOT should mandate such a provision, it should make it clear that ''damages may be charged only when the airline charges for similar damage caused by humans, such as a child urinating in an airline seat.'' [203]

Airlines, however, support DOT's proposal to allow airlines to charge passengers for damage caused by their service animals. Air Canada commented that carriers should be allowed to require service animal users to ''agree to indemnify and hold harmless the airline and other passengers for any damage their animal may cause.'' In addition, A4A suggested the inclusion of a statement in the DOT-issued service animal form that airlines may charge service animal users for damage caused by their service animal.[204]

DOT Response

The Department has decided to finalize, as proposed, a provision allowing airlines to charge passengers traveling with service animals for any damage to the aircraft caused by the passenger's service animal so long as the airline charges passengers without disabilities for similar repairs or damage. The Service Animal Air Transportation Form and the Relief Form provide notice to service animal users that they may be responsible for damage caused by their service animals. The Department acknowledges the concerns of disability advocates that service animal users may, in practice, be disproportionally charged for damage

[198] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

[199] Comment from PVA, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19429.*

[200] Comments from DREDF, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19264,* and the Oklahoma Disability Law Center, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19237.*

[201] While the Guide Dog Foundation and America's VetDogs do not agree with the Department's decision to allow airlines to require that a service animal fit into its user's footspace or lap, this organization noted that ''[m]ost service dogs are able to curl up under their partner's feet on an airplane.'' See comments from the Guide Dog Foundation, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18141, and* America's VetDogs, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-18138.*

[202] Comments from the National Disability Rights Network, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19210,* Disability Rights New Jersey, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19091,* Disability Rights Florida, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19336,* and Oklahoma Disability Law Center, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-19237.*

[203] Comment from The Disability Coalition (New Mexico), *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19219.*

[204] Comment from A4A, *https://beta.regulations.gov/comment/DOT-OST-2018-0068-19240.*

caused by their service animals when compared to others who inflict similar damage. The Department emphasizes that such action by airlines would violate the Department's explicit regulatory mandate that service animal users may only be charged for damage caused by their service animals if other passengers are charged for similar types of damage. The Department's Office of Aviation Consumer Protection will take action as appropriate if it finds inequities between the treatment of service animal users and non-service animal users.

11. Codeshare Flights

Under the Department's existing ACAA rule, U.S. carriers that participate in a code-sharing arrangement with a foreign carrier are responsible for ensuring that the foreign carrier complies with the service animal provisions of the rule with respect to a passenger traveling under the U.S. carrier's code on the foreign carrier's aircraft on flights between two foreign points. Although foreign airlines are only required to carry dogs, based on the language in the existing ACAA rule, the rule held a foreign carrier's U.S. codeshare partner responsible if the foreign carrier refused to transport service animal species other than dogs for passengers traveling under the U.S. carrier's code. Because the Department was considering recognizing animals other than just dogs as service animals in the NPRM, we sought comment on whether we should include language in the rule to make it clear that U.S. airlines are not responsible for their foreign carrier codeshare partner's failure to carry animal species other than dogs as service animals. However, because this final rule requires only that U.S. and foreign air carriers recognize dogs as service animals, a conflict no longer exists between the species of service animals that U.S. carriers and foreign carriers are required to carry. As such, this issue is moot, and a substantive change in the rule text is unnecessary.

As a technical amendment, however, the Department will make clear that U.S. carriers continue to be responsible for compliance with ACAA service animal regulations (now found at 14 CFR 382 Subpart EE), if the U.S. carrier participates in a code-sharing arrangement with a foreign carrier with respect to flights between two foreign points.[205] This amendment is non-substantive.

Effective Date of Final Rule

This final rule will become effective January 11, 2021 to provide airlines time to analyze and train personnel on the new service animal requirements, particularly given the COVID–19 public health emergency's impact on the airline industry.

Regulatory Analyses and Notices

A. Executive Order 12866 (Regulatory Planning and Review), Executive Order 13563 (Improving Regulation and Regulatory Review), and DOT Regulatory Policies and Procedures (49 CFR part 5)

This final rule has been determined to be significant under Executive Order 12866 (''Regulatory Planning and Review'') and the Department of Transportation's Regulatory Policies and Procedures (found at 49 CFR part 5, subpart B) because of its considerable interest to the disability community and the aviation industry. It does not, however, meet the criteria under Executive Order 12866 for an economically significant rule. It has been reviewed by the Office of Management and Budget under that Executive Order.

Executive Orders 12866 and 13563 (''Improving Regulation and Regulatory Review'') require agencies to regulate in the ''most cost-effective manner,'' to make a ''reasoned determination that the benefits of the intended regulation justify its costs,'' and to develop regulations that ''impose the least burden on society.'' The rule defines a service animal as a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability; treats psychiatric service animals like other service animals; and allows airlines to require passengers traveling with a service animal to attest to the animal's good behavior and good health. Airlines will no longer be required to recognize emotional support animals (ESAs) as service animals.

The primary economic impact of this final rule is that it eliminates a market inefficiency. The current policy amounts to a price restriction which requires that airlines forgo a potential revenue source, as airlines are currently prohibited from charging a pet fee for transporting emotional support animals. Airlines charge as much as $175 to transport pets on a one-way trip, giving passengers an incentive to claim their pets as emotional support animals. A4A estimates that airline carriers transported 751,000 emotional support animals in 2017, a 56.1 percent increase from 2016. This number nearly equals the 784,000 pets transported in 2017. The final rule will eliminate a pricing restriction currently imposed by government on airlines by allowing them to set a price on the transport of emotional support animals other than zero dollars.

Removing the current requirement that carriers must transport emotional support animals free of charge will allow market forces (*i.e.,* carriers as producers and passengers as consumers) to set the price for air transportation of emotional support animals as pets. This provision will allow carriers to charge passengers traveling with emotional support animals (dogs and other accepted species on board of an aircraft) with pet transportation fees. This represents a transfer of surplus from passengers to airlines, and does not have implications for the net benefits calculation of the final rule.

The final rule will also allow airlines to require passengers traveling with service animals to produce two forms of documentation developed by DOT. This cost element places a potential burden on passengers traveling with service animals who would need to submit two DOT forms to airlines. We estimate that the forms could create as much as 84,000 burden hours and $1.3 million in costs per year. In some cases, however, carriers already ask passengers to complete equivalent nongovernmental forms; thus, the analysis overestimates the net burden created by this rulemaking.

Evaluating other economic impacts was more difficult due to data limitations. To gauge the potential magnitude of these impacts, we combined the limited data with reasonable assumptions about ESA transport that could occur under the final rule and a demand elasticity from a surrogate market. The regulatory impact analysis, summarized in Table 1 and available in the docket, indicates that the final rule could be expected to generate annual cost savings to airlines between $15.6 million and $21.6 million and annual net benefits of $3.7 to $12.5 million. Public nonuse values potentially complicate the analysis, but there is little evidence that these values exist or would be large enough to offset externality costs completely.

[205] 14 CFR 382.7(c).

TABLE 1—SUMMARY OF ECONOMIC IMPACTS DUE TO FINAL RULE

[2018 Dollars, millions]

Impact	Annual value
Costs:	
Paperwork burden for passengers traveling with service animals	$1.3.
Cost savings to airlines associated with providing ESA travel	−$21.6 to −$15.6.
Benefits:	
Lost benefits to individuals who no longer travel with ESAs	−$10.6 to −$7.8.
Reduction in negative externalities caused by ESAs	Not quantified.
Transfers:	
Increased fees paid by passengers travelling with ESAs to airlines	$54.0 to $59.6.
Net benefits (benefits minus costs)	$3.7 to $12.5.

B. Executive Order 13771 (Reducing Regulation and Controlling Regulatory Costs)

This final rule is considered an E.O. 13771 deregulatory action. Details on the estimated cost savings of this final rule are discussed in the rule's RIA, which has been uploaded to the docket.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities. A direct air carrier or foreign air carrier is a small business if it provides air transportation only with small aircraft (*i.e.,* aircraft with up to 60 seats/18,000-pound payload capacity).[206] Relative to typical airlines' operating costs and revenues, the impact is expected to be nonsignificant. We received no comment on the preliminary finding of nonsignificance or, more generally, the potential impact of this rulemaking on small entities. Therefore, the Department certifies that this final rule will not have a significant impact on a substantial number of small entities.

D. Executive Order 13132 (Federalism)

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (''Federalism''). This final rule does not include any provision that: (1) Has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government; (2) imposes substantial direct compliance costs on State and local governments; or (3) preempts State law. States are already preempted from regulating in this area by the Airline Deregulation Act, 49 U.S.C. 41713. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

E. Executive Order 13084

This rulemaking has been analyzed in accordance with the principles and criteria contained in Executive Order 13084 (''Consultation and Coordination with Indian Tribal Governments''). Because this rulemaking does not significantly or uniquely affect the communities of the Indian Tribal governments or impose substantial direct compliance costs on them, the funding and consultation requirements of Executive Order 13084 do not apply.

F. Paperwork Reduction Act

Under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) (PRA), no person is required to respond to a collection of information unless it displays a valid Office of Management and Budget (OMB) control number. As required by the PRA, the Department has submitted the Information Collection Request (ICR) abstracted below to OMB. Before OMB decides whether to approve those proposed collections of information that are part of this final rule and issue a control number, the public must be provided 30 days to comment. Organizations and individuals desiring to submit comments on the information collection requirements should direct them to the Office of Management and Budget, Attention: Desk Officer for the Office of the Secretary of Transportation, Office of Information and Regulatory Affairs, Washington, DC 20503, and should also send a copy of their comments to: Department of Transportation, Office of Aviation Consumer Protection, Office of the General Counsel, 1200 New Jersey Avenue SE, Washington, DC 20590. OMB is required to make a decision concerning the collection of information requirements contained in this rule between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication. The Department may not impose a penalty on persons for violating information collection requirements which do not display a current OMB control number, if required. The 60-day notice for this information collection was previously published in the **Federal Register** as part of the NPRM on February 5, 2020 volume 85, page 6474. The Department invited interested parties to comment on the information collection requirements contained in the NPRM and the Department received one comment on the regulatory analysis that was referenced in the NPRM. This comment, and the Department's responses, are discussed in the Traveling by Air with Service Animals Regulatory Impact Analysis.

This final rule adds two new collections of information that allows airlines to require passengers traveling with service animals to provide carriers with the following two forms of documentation developed by the Department:

1. U.S. Department of Transportation Service Animal Air Transportation Form (''Behavior and Health Attestation Form''): This form would be completed by passengers traveling with service animals to inform airlines of the service animal's health, training, and behavior and educate passengers on how service animals in air transportation are expected to behave, and of the consequences of service animal misbehavior.

2. U.S. Department of Transportation Service Animal Relief Attestation Form (''Relief Attestation Form''): This form would be completed by passengers traveling with service animals on flight segments scheduled to take 8 hours or more to provide assurances to airlines that the service animal will not need to relieve itself on the flight or that the animal can relieve itself in a way that

[206] See 14 CFR 399.73.

does not create a health or sanitation issue, and to educate passengers of the consequences should an animal relieve itself on aircraft in an unsanitary way.

For each of these information collections, the title, a description of the respondents, and an estimate of the annual recordkeeping and periodic reporting burden are set forth below:

1. Requirement To Prepare and Submit to Airlines the DOT Air Transportation Service Animal Behavior and Health Attestation Form

Respondents: Passengers with disabilities traveling on aircraft with service animals.

Number of Respondents: The Department estimates that 319,000 service animals are transported annually by U.S. carriers on flights to, within, and from the United States and by foreign air carriers on flights to and from the United States.[207] Assuming that one passenger with a disability travels with a service animal, 319,000 respondents would have to complete the form.

Estimated Annual Burden on Respondents: We estimate that completing the form would require 15 minutes (.25 hours) per response, including the time it takes to retrieve an electronic or paper version of the form from the carrier's or DOT's website, reviewing the instructions, and completing the questions. Passengers would spend a total of 79,750 hours annually (0.25 hours x 319,295 passengers) to retrieve and complete an accessible version of the form. Passengers would fill out the forms on their own time without pay. To estimate the value of this uncompensated activity, we use median wage data from the Bureau of Labor Statistics.[208] We use a post-tax wage estimate of $15.42 ($18.58 median for all occupations minus a 17 percent estimated tax rate).[209] The estimated annual value of this time is $1,229,857.

2. Requirement To Prepare and Submit to Airlines the DOT Service Animal Relief Attestation Form

Respondents: Passengers with disabilities traveling on aircraft with service animals on flight segments scheduled to take 8 hours or more.

Number of Respondents: The Department estimates that 5 percent of service animal users would be on flight segments scheduled to take 8 hours or more and would also have to complete the Relief Attestation Form, for a total of 15,950 respondents.

Estimated Annual Burden on Respondents: We estimate that completing the form will require 15 minutes (.25 hours) per response, including the time it takes to retrieve an electronic or paper version of the form from the carrier's or DOT's website, reviewing the instructions, and completing the questions. Passengers would spend a total of 3,987.5 hours annually (0.25 hours x 15,950 passengers) to retrieve an accessible version of the form and complete the form. Passengers would fill out the forms on their own time without pay, as they would with the Animal Behavior and Health Attestation Form. The estimated annual value of this time is $61,493.

Table 2 summarizes the estimated burden and costs of the two new DOT forms for Paperwork Reduction Act (PRA) accounting purposes. In some cases, carriers already require passengers traveling with service animals to complete equivalent forms. Allegiant Air and Delta Air Lines ask passengers to carry health forms, for example, while American Airlines and Hawaiian Airlines ask passengers to fill out relief attestation forms. Thus, the estimates are likely to overestimate any new burden created by this rulemaking.

TABLE 1—PAPERWORK COST ESTIMATES FOR U.S. DOT SERVICE ANIMAL FORMS

Form	Passengers	Hours	Total hours	Hourly time value	Subtotal
Behavior & health	319,000	0.25	79,750	$15.42	$1,229,857
Relief	15,950	0.25	3,987.5	$15.42	61,493
Total			83,737.5		1,291,349

G. Unfunded Mandates Reform Act

The Department has determined that the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply to this rulemaking.

H. National Environmental Policy Act

The Department has analyzed the environmental impacts of this action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*) and has determined that it is categorically excluded pursuant to DOT Order 5610.1C, Procedures for Considering Environmental Impacts (44 FR 56420, Oct. 1, 1979). Categorical exclusions are actions identified in an agency's NEPA implementing procedures that do not normally have a significant impact on the environment and therefore do not require either an environmental assessment (EA) or environmental impact statement (EIS).[210] In analyzing the applicability of a categorical exclusion, the agency must also consider whether extraordinary circumstances are present that would warrant the preparation of an EA or EIS.[211] Paragraph 3.c.6.i of DOT Order 5610.1C categorically excludes ''[a]ctions relating to consumer protection, including regulations.'' Because this rulemaking relates to ensuring both the nondiscriminatory access to air transportation for consumers with disabilities, as well as the safe transport of the traveling public, this rulemaking is a consumer protection rulemaking. The Department does not anticipate any environmental impacts, and there are no extraordinary circumstances present in connection with this rulemaking.

List of Subjects in 14 CFR Part 382

Air Carriers, Civil rights, Consumer protection, Individuals with Disabilities,

[207] Comment from A4A, *https://www.regulations.gov/document?D=DOT-OST-2018-0068-4288.* A4A estimates that 281,000 service animals were transported on U.S. airlines in 2017. DOT estimates that 38,000 service animals were transported by foreign airlines on flights to and from the U.S. in 2017 based on air carrier passenger data from the Bureau of Transportation Statistics, available at *https://www.bts.gov/newsroom/2017-traffic-data-us-airlines-and-foreign-airlines-us-flights.*

[208] For a discussion of estimating the value of uncompensated activities, see ''Valuing Time in U.S. Department of Health and Human Services Regulatory Impact Analyses: Conceptual Framework and Best Practices'' from the Department of Health and Human Services, available at *https://aspe.hhs.gov/system/files/pdf/257746/VOT.pdf.*

[209] Bureau of Labor Statistics (2019). ''May 2018 National Occupational Employment and Wage Estimates: United States.'' *https://www.bls.gov/oes/current/oes_nat.htm.*

[210] *See* 40 CFR 1508.4.

[211] *Id.*

Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the Department of Transportation amends 14 CFR part 382 as follows:

PART 382—NONDISCRIMINATION ON THE BASIS OF DISABILITY IN AIR TRAVEL

■ 1. The authority citation for part 382 continues to read as follows:

Authority: 49 U.S.C. 41705.

■ 2. Amend § 382.3 by adding in alphabetical order the definitions of service animal and service animal handler to read as follows:

§ 382.3 What do the terms in this rule mean?

* * * * *

Service animal means a dog, regardless of breed or type, that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability. Animal species other than dogs, emotional support animals, comfort animals, companionship animals, and service animals in training are not service animals for the purposes of this part.

A *Service animal handler* is a passenger in air transportation who is a qualified individual with a disability who receives assistance from a service animal(s) that does work or performs tasks that are directly related to the individual's disability, or a third party who accompanies the individual with a disability traveling with a service animal such as a parent of a minor child or a caretaker. The service animal handler is responsible for keeping the animal under control at all times, and caring for and supervising the service animal, which includes toileting and feeding.

* * * * *

■ 3. In § 382.7, revise paragraph (c) to read as follows:

§ 382.7 To whom do the provisions of this part apply?

* * * * *

(c) As a foreign carrier, you are not subject to the requirements of this part with respect to flights between two foreign points, even with respect to flights involving code-sharing arrangements with U.S. carriers. As a U.S. carrier that participates in a code-sharing arrangement with a foreign carrier with respect to flights between two foreign points, you (as distinct from the foreign carrier) are responsible for ensuring compliance with the service provisions of subparts A through C, E through H, and K of this part, with respect to passengers traveling under your code on such a flight.

* * * * *

■ 4. Section 382.27 is revised to read as follows:

§ 382.27 May a carrier require a passenger with a disability to provide advance notice in order to obtain certain specific services in connection with a flight?

(a) Except as provided in paragraphs (b) and (c) of this section and §§ 382.75 and 382.133(e)(4), (5), (f)(5) and (6), as a carrier you must not require a passenger with a disability to provide advance notice in order to obtain services or accommodations required by this part.

(b)(1) You may require a passenger with a disability to provide up to 72 hours' advance notice and check in one hour before the check-in time for the general public to receive carrier-supplied in-flight medical oxygen on international flights, and 48 hours' advance notice and check-in one hour before the check-in time for the general public to receive carrier-supplied in-flight medical oxygen on domestic flights. This service is optional; you are not required to provide carrier-supplied in-flight medical oxygen, but you may choose to do so.

(2) You may require a passenger with a disability to provide 48 hours' advance notice and check-in one hour before the check-in time for the general public to use his/her ventilator, respirator, CPAP machine or POC.

(3) You may require a passenger with a disability seeking to travel with a service animal in the cabin of the aircraft to provide up to 48 hours' advance notice through submission of the forms identified in § 382.75 (a) and (b) as a condition of permitting the service animal to travel in the cabin if the reservation is made more than 48 hours prior to a flight's departure. In the alternative, you may require a passenger with a disability seeking to travel with a service animal in the cabin of the aircraft to provide the forms identified in § 382.75 (a) and (b) at the passenger's departure gate on the date of travel as a condition of permitting the service animal to travel in the cabin.

(c) You may require a passenger with a disability to provide up to 48 hours' advance notice and check in one hour before the check-in time for the general public to receive the following services and accommodations. The services listed in paragraphs (c)(1) through (c)(3) of this section are optional; you are not required to provide them, but you may choose to do so.

(1) Carriage of an incubator;

(2) Hook-up for a respirator, ventilator, CPAP machine or POC to the aircraft electrical power supply;

(3) Accommodation for a passenger who must travel in a stretcher;

(4) Transportation for an electric wheelchair on an aircraft with fewer than 60 seats;

(5) Provision of hazardous materials packaging for batteries or other assistive devices that are required to have such packaging;

(6) Accommodation for a group of ten or more qualified individuals with a disability, who make reservations and travel as a group; and

(7) Provision of an on-board wheelchair on an aircraft with more than 60 seats that does not have an accessible lavatory.

(8) Accommodation of a passenger who has both severe vision and hearing impairments (see § 382.29(b)(4)).

(d) If the passenger with a disability provides the advance notice you require, consistent with this section, for a service that you must provide (see paragraphs (b)(2) through (3) and (c)(4) through (8) of this section) or choose to provide (see paragraphs (b)(1) and (c)(1) through (c)(3) of this section), you must provide the requested service or accommodation except to comply with any applicable safety regulations.

(e) Your reservation and other administrative systems must ensure that when passengers provide the advance notice that you require, consistent with this section, for services and accommodations, the notice is communicated, clearly and on time, to the people responsible for providing the requested service or accommodation.

(f) If a passenger with a disability provides the advance notice you require, consistent with this section, and the passenger is forced to change to another flight (*e.g.,* because of a flight cancellation), you must, to the maximum extent feasible, provide the accommodation on the new flight. If the new flight is another carrier's flight, you must provide the maximum feasible assistance to the other carrier in providing the accommodation the passenger requested from you.

(g) If a passenger does not meet advance notice or check-in requirements you establish consistent with this section, you must still provide the service or accommodation if you can do so by making reasonable efforts, without delaying the flight.

■ 5. Revise the heading of subpart E and add §§ 382.72 through 382.80 to subpart E to read as follows:

Subpart E—Accessibility of Aircraft and Service Animals on Aircraft

Sec.

* * * * *

382.72 Must carriers allow a service animal to accompany a passenger with a disability?
382.73 How do carriers determine if an animal is a service animal? May a carrier require that a service animal be under the control of the service animal user or handler?
382.74 How many service animals must a carrier transport in the cabin of aircraft?
382.75 May a carrier require documentation from passengers with disabilities seeking to travel with a service animal?
382.76 May a carrier require a service animal user to physically check-in at the airport as a condition of travel with a service animal?
382.77 May carriers restrict the location and placement of service animals on aircraft?
382.78 May carriers charge individuals with disabilities for the damage their service animal causes?
382.79 Under what other circumstances may carriers refuse to provide transportation to a service animal traveling with a passenger with a disability?
382.80 May carriers impose additional restrictions on the transport of service animals?

§ 382.72 Must carriers allow a service animal to accompany a passenger with a disability?

You must allow a service animal to accompany a passenger with a disability. You must not deny transportation to a service animal based on the animal's breed or type or on the basis that its carriage may offend or annoy carrier personnel or persons traveling on the aircraft.

§ 382.73 How do carriers determine if an animal is a service animal that must be accepted for transport? May a carrier require that a service animal be under the control of the service animal user or handler?

(a) You may rely on one or more of the factors set forth in paragraphs (a)(1) through)(3) of this section to determine if an animal is a service animal that must be accepted for transport.

(1) You may make two inquiries to determine whether an animal qualifies as a service animal. You may ask if the animal is required to accompany the passenger because of a disability and what work or task the animal has been trained to perform. You must not ask about the nature or extent of a person's disability or ask that the service animal demonstrate its work or task.

(2) You may observe the behavior of an animal. A trained service animal will remain under the control of its handler. It does not run freely around an aircraft or an airport gate area, bark or growl repeatedly at other persons or other animals on the aircraft or in the airport gate area, bite, jump on, or cause injury to people, or urinate or defecate in the cabin or gate area. An animal that engages in such disruptive behavior demonstrates that it has not been successfully trained to behave properly in a public setting and carriers are not required to treat it as a service animal without a carrier in the cabin, even if the animal performs an assistive function for a passenger with a disability.

(3) You may look for physical indicators, such as a harness or vest on the animal, to determine if the animal is a service animal.

(b) You may require that a service animal be harnessed, leashed, or otherwise tethered at all times by the service animal user or service animal handler while in areas of the airport that you own, lease or control, or on an aircraft.

§ 382.74 How many service animals must a carrier transport in the cabin of aircraft?

You are not required to accept more than two service animals for a single passenger with a disability.

§ 382.75 May a carrier require documentation from passengers with disabilities seeking to travel with a service animal?

(a) If a passenger with a disability seeks to travel with a service animal, you may require the passenger to provide you, as a condition of permitting the service animal to travel in the cabin, a current completed U.S. Department of Transportation Service Animal Air Transportation Form. Current means the form was completed on or after the date the passenger purchased his or her airline ticket.

(b) On a flight segment scheduled to take 8 hours or more, you may, as a condition of permitting a service animal to travel in the cabin, require the passenger with a disability traveling with the service animal to confirm that the animal will not need to relieve itself on the flight, or that the animal can relieve itself in a way that does not create a health or sanitation issue on the flight by providing a current DOT Service Animal Relief Attestation Form. Current means the form was completed on or after the date the passenger purchased his or her airline ticket.

(c) You are not permitted to require documentation from passengers with disabilities traveling with service animals beyond the completion of the forms identified in paragraphs (a) and (b) of this section except to comply with requirements on transport of animals by a Federal agency, a U.S. territory or a foreign jurisdiction.

(d) As a U.S. air carrier, if you require service animal users to submit the forms identified in paragraphs (a) and (b) of this section, you must have copies of these forms available for passengers at each airport you serve. As a foreign air carrier, if you require service animal users to submit the forms identified in paragraphs (a) and (b) of this section, you must have copies of the forms available for passengers at each airport serving a flight you operate that begins or ends at a U.S. airport.

(e) If you have a website, you must have the forms identified in paragraphs (a) and (b) available to passengers in an accessible format. You must mail copies of the forms identified in paragraphs (a) and (b) to passengers upon request.

(f) If you require a passenger with a disability traveling with a service animal to submit the forms identified in paragraphs (a) and (b) of this section in advance of the passenger's date of travel, you must provide the passenger the option of submitting the completed form(s) to you electronically or by hardcopy.

(g)(1) If a passenger's reservation was made more than 48 hours in advance of the first originally scheduled departure time on the passenger's itinerary, you may require that passenger provide up to 48 hours advance notice by submitting the form identified in paragraph (a) of this section.

(2) If a passenger's reservation was made more than 48 hours in advance of the first originally scheduled departure time on the passenger's itinerary and a flight segment on the passenger's itinerary is scheduled to take 8 hours or more, you may require that the passenger provide up to 48 hours advance notice by submitting the form identified in paragraph (b) of this section.

(3) If a passenger's reservation was made less than 48 hours in advance of the first originally scheduled departure time on the passenger's itinerary, you may not require that passenger provide advance notice of his or her intent to travel with a service animal. You may require that the passenger complete the forms identified in paragraphs (a) and (b) of this section and submit a copy of the form to you at the passenger's departure gate on the date of travel.

(h) If the passenger does not meet the advance notice requirements you establish consistent with this section, you must still provide the accommodation if you can do so by making reasonable efforts, without delaying the flight.

§ 382.76 May a carrier require a service animal user to check-in physically at the airport?

You may not require a passenger with a disability to check-in physically at the airport, rather than using the online check-in available to the general public, on the basis that the passenger is traveling with a service animal.

§ 382.77 May carriers restrict the location and placement of service animals on aircraft?

(a) You must permit a service animal to accompany a passenger with a disability on the passenger's lap or in the passenger's foot space, unless this location and placement would:

(1) Be inconsistent with safety requirements set by the FAA or the foreign carrier's government; or

(2) Encroach into another passenger's space.

(b) Before refusing to transport a large service animal that cannot be accommodated on the passenger's lap or in the passenger's foot space without encroaching into another passenger's space, you must offer the passenger the opportunity to move with the animal to another seat location within the same class of service, if available on the aircraft, where the animal can be accommodated. You are not required to reseat other passengers to accommodate a service animal except as required for designated priority seats in Subpart F.

(c) If there are no alternatives available to enable the passenger to travel with the service animal in the cabin of the scheduled flight, you must offer the passenger the opportunity to transport the service animal in the cargo hold free of charge or travel on a later flight to the extent there is space available on a later flight and the transport is consistent with the safety requirements set by the FAA or a foreign carrier's government.

§ 382.78 May carriers charge individuals with disabilities for the damage their service animal causes?

While you generally cannot charge an individual with a disability for transporting service animals, or for providing other services that this part requires, you may charge a passenger with a disability for damage caused by his or her service animal so long as you normally charge individuals without disabilities for similar kinds of damage.

§ 382.79 Under what other circumstances may carriers refuse to provide transportation to a service animal traveling with a passenger with a disability?

(a) You may deny transport to a service animal under the following circumstances:

(1) The animal poses a direct threat to the health or safety of others (see definition in § 382.3);

(2) The animal causes a significant disruption in the cabin or at an airport gate area, or its behavior on the aircraft or at an airport gate area indicates that it has not been trained to behave properly in public (*e.g.,* running freely, barking or growling repeatedly at other persons on the aircraft, biting or jumping on people, or urinating or defecating in the cabin or gate area);

(3) The animal's carriage would violate applicable safety or health requirements of any U.S. federal agency, U.S. territory or foreign government; or

(4) The passenger with a disability seeking to travel with a service animal in the cabin of the aircraft does not provide completed current forms as set forth in § 382.75 (a) and (b) to the carrier when requested to do so.

(b) In determining whether to deny transport to a service animal on the basis that the animal poses a direct threat under paragraph (a)(1) of this section, you must make an individualized assessment, independent of the dog's breed or type, based on reasonable judgment that relies on the best available objective evidence to ascertain the nature, duration, and severity of the risk; the probability that the potential injury will actually occur; and whether reasonable modifications of policies, practices, or procedure will mitigate the risk. A current completed U.S. Department of Transportation Service Animal Air Transportation Form may be used in making this determination.

(c) In determining whether to deny transport to a service animal on the basis that the animal has misbehaved and/or has caused a significant disruption in the cabin under paragraph (a)(2) of this section, you must make an individualized assessment, independent of the dog's breed or type, based on reasonable judgment that relies on the best available objective evidence to ascertain the probability that the misbehavior and/or disruption will continue to occur; and whether reasonable modifications of policies, practices, or procedure will mitigate the misbehavior and/or the disruption. A current completed U.S. Department of Transportation Service Animal Air Transportation Form and a current completed U.S. Department of Transportation Service Animal Relief Attestation Form may be used in making this determination.

(d) In conducting the analysis required under paragraphs (a)(1) and (2) of this section, you must not deny transportation to the service animal if there are means available short of refusal that would mitigate the problem (*e.g.,* muzzling a barking service dog or taking other steps to comply with animal health regulations needed to permit entry of the service animal into a domestic territory or a foreign country).

(e) If you refuse to provide transportation to a service animal based on any provision in this part, you must provide the individual with a disability accompanied by the service animal a written statement of the reason for the refusal. This statement must include the specific basis for the carrier's opinion that the refusal meets the standards of paragraphs (a) through (c) of this section or is otherwise specifically permitted by this part. You must provide this written statement to the individual with a disability accompanied by the service animal either at the airport, or within 10 calendar days of the refusal of transportation.

§ 382.80 May carriers impose additional restrictions on the transport of service animals?

Carriers are not permitted to establish additional restrictions on the transport of service animals outside of those specifically permitted by the provisions in this part, unless required by applicable FAA, TSA, or other Federal requirements or a foreign carrier's government.

§ 382.117 [Removed]

■ 6. Remove § 382.117.

Issued in Washington, DC.

Elaine L. Chao,

Secretary.

[FR Doc. 2020–26679 Filed 12–7–20; 4:15 pm]

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