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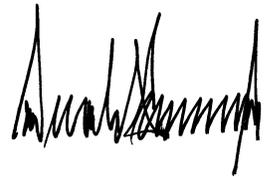
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**Title 3—****Presidential Determination No. 2017–10 of July 21, 2017****The President****Continuation of U.S. Drug Interdiction Assistance to the Government of Colombia****Memorandum for the Secretary of State[ and] the Secretary of Defense**

By the authority vested in me as President by the Constitution and the laws of the United States, and pursuant to the authority vested in me by section 1012 of the National Defense Authorization Act for Fiscal Year 1995, as amended (22 U.S.C. 2291–4), I hereby certify, with respect to Colombia, that: (1) interdiction of aircraft reasonably suspected to be primarily engaged in illicit drug trafficking in that country's airspace is necessary, because of the extraordinary threat posed by illicit drug trafficking to the national security of that country; and (2) Colombia has appropriate procedures in place to protect against innocent loss of life in the air and on the ground in connection with such interdiction, which includes effective means to identify and warn an aircraft before the use of force is directed against the aircraft.

The Secretary of State is authorized and directed to publish this determination in the *Federal Register* and to notify the Congress of this determination.



THE WHITE HOUSE,  
*Washington, July 21, 2017*

# Rules and Regulations

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This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

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## OFFICE OF PERSONNEL MANAGEMENT

### 5 CFR Part 532

RIN 3206-AN50

### Prevailing Rate Systems; Definition of Brown County, Wisconsin, and Forsyth and Mecklenburg Counties, North Carolina, to Nonappropriated Fund Federal Wage System Wage Areas

**AGENCY:** U.S. Office of Personnel Management.

**ACTION:** Final rule.

**SUMMARY:** This rule amends the geographic boundaries of three nonappropriated fund (NAF) Federal Wage System (FWS) wage areas. Based on consensus recommendations of the Federal Prevailing Rate Advisory Committee (FPRAC), the U.S. Office of Personnel Management (OPM) is defining Brown County, Wisconsin, as an area of application county to the Lake, Illinois, NAF FWS wage area; Forsyth County, North Carolina, as an area of application to the Cumberland, NC, NAF FWS wage area; and Mecklenburg County, NC, as an area of application to the Richland, South Carolina, NAF FWS wage area. These changes are necessary because there are NAF FWS employees working in these three counties, and the counties are not currently defined in regulation to NAF wage areas.

**DATES:**

*Effective date:* This regulation is effective on August 28, 2017.

*Applicability date:* This change applies on the first day of the first applicable pay period beginning on or after September 27, 2017.

**FOR FURTHER INFORMATION CONTACT:** Madeline Gonzalez, by telephone at (202) 606-2838 or by email at *pay-leave-policy@opm.gov*.

**SUPPLEMENTARY INFORMATION:** On May 15, 2017, OPM issued a proposed rule (82 FR 22298) to define—

- Brown County, WI, as an area of application county to the Lake, IL, NAF FWS wage area;
- Forsyth County, NC, as an area of application to the Cumberland, NC, NAF FWS wage area; and
- Mecklenburg County, NC, as an area of application to the Richland, SC, NAF FWS wage area.

FPRAC, the national labor-management committee responsible for advising OPM on matters concerning the pay of FWS employees, reviewed and recommended these changes by consensus. These changes will apply on the first day of the first applicable pay period beginning on or after 30 days following publication of the final regulations.

The proposed rule had a 30-day comment period, during which OPM received no comments.

### Regulatory Flexibility Act

I certify that these regulations will not have a significant economic impact on a substantial number of small entities because they will affect only Federal agencies and employees.

### List of Subjects in 5 CFR Part 532

Administrative practice and procedure, Freedom of information, Government employees, Reporting and recordkeeping requirements, Wages.

### E.O. 13771, Reducing Regulation and Controlling Regulatory Costs

This rule is not an E.O. 13771 regulatory action because this rule is not significant under E.O. 12866.

U.S. Office of Personnel Management.

**Kathleen M. McGettigan,**  
*Acting Director.*

Accordingly, OPM is amending 5 CFR part 532 as follows:

### PART 532—PREVAILING RATE SYSTEMS

■ 1. The authority citation for part 532 continues to read as follows:

**Authority:** 5 U.S.C. 5343, 5346; § 532.707 also issued under 5 U.S.C. 552.

■ 2. Appendix D to subpart B is amended by revising the wage area listing for the Lake, IL; Cumberland, NC;

and Richland, SC, wage areas to read as follows:

### Appendix D to Subpart B of Part 532—Nonappropriated Fund Wage and Survey Areas

*	*	*	*	*
<b>ILLINOIS</b>				
Lake				
<i>Survey Area</i>				

Illinois:  
Lake  
*Area of Application. Survey area plus:*

Illinois:  
Cook  
Rock Island  
Vermilion

Iowa:  
Johnson  
Michigan:  
Dickinson  
Marquette

Wisconsin:  
Brown  
Dane  
Milwaukee

*	*	*	*	*
<b>NORTH CAROLINA</b>				

*	*	*	*	*
<b>Cumberland</b>				
<i>Survey Area</i>				

North Carolina:  
Cumberland  
*Area of Application. Survey area plus:*

North Carolina:  
Durham  
Forsyth  
Rowan

*	*	*	*	*
<b>SOUTH CAROLINA</b>				

*	*	*	*	*
<b>Richland</b>				
<i>Survey Area</i>				

South Carolina:  
Richland  
*Area of Application. Survey area plus:*

North Carolina:  
Buncombe  
Mecklenburg  
South Carolina  
Sumter  
Tennessee  
Washington

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[FR Doc. 2017-18204 Filed 8-25-17; 8:45 am]

**BILLING CODE 6325-39-P**

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

[Docket No. FAA-2016-7264; Product Identifier 2015-NM-185-AD; Amendment 39-18998; AD 2017-17-08]

RIN 2120-AA64

**Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Airbus Model A330-200, -200 Freighter, and -300 series airplanes; and Model A340-500 and -600 series airplanes. This AD was prompted by a quality control review on the final assembly line, which determined that the wrong aluminum alloy was used to manufacture several structural parts. This AD requires a one-time eddy current conductivity measurement of certain cabin and cargo compartment structural parts to determine if an incorrect aluminum alloy was used, and replacement of any affected part with a serviceable part. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Airbus SAS, Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7264.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7264; or in person at the Docket

Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:****Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Model A330-200, -200 Freighter, and -300 series airplanes; and Model A340-500 and -600 series airplanes. The SNPRM published in the **Federal Register** on May 19, 2017 (82 FR 22907) (“the SNPRM”). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the **Federal Register** on June 21, 2016 (81 FR 40201) (“the NPRM”). The NPRM proposed to require a one-time eddy current conductivity measurement of certain cabin and cargo compartment structural parts to determine if an incorrect aluminum alloy was used, and replacement of any affected part with a serviceable part. The NPRM was prompted by a quality control review on the final assembly line, which determined that the wrong aluminum alloy was used to manufacture several structural parts. The SNPRM proposed to require new inspection locations for certain airplanes, and removing incorrect part numbers. We are issuing this AD to detect and replace structural parts made of an incorrect aluminum alloy. This condition could result in reduced structural integrity of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2017-0021, dated February 8, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Airbus Model A330-200, -200 Freighter, and -300 series airplanes; and Model A340-

500 and -600 series airplanes. The MCAI states:

Following an Airbus quality control review on the final assembly line, it was discovered that wrong aluminum alloy was used to manufacture several structural parts.

This condition, if not detected and corrected, could reduce the structural integrity of the aeroplane.

To address this potential unsafe condition, Airbus published [Service Bulletin] (SB) A330-53-3261, SB A330-53-3262, and SB A340-53-5072, as applicable to aeroplane type/model, to provide instructions to identify the affected parts. Consequently, EASA issued AD 2015-0206 to require a one-time special detailed inspection (SDI) [eddy current conductivity measurements] of certain cabin and/or cargo compartment parts for material identification and, depending on findings, replacement with serviceable parts.

Since that [EASA] AD was issued, Airbus identified that the list of affected structural parts in SB A330-53-3261 was incorrect. Prompted by these findings, Airbus issued SB A330-53-3261 Revision 01 to introduce the new locations to be inspected and remove other parts not affected.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2015-0206, which is superseded, and expands the locations to be inspected.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7264.

**Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

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

**Related Service Information Under 1 CFR Part 51**

Airbus has issued the following service information:

- Airbus Service Bulletin A330-53-3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.
- Airbus Service Bulletin A330-53-3262, including Appendixes 01 and 02, dated June 23, 2015.

- Airbus Service Bulletin A340–53–5072, including Appendixes 01 and 02, dated June 23, 2015.

This service information describes procedures for a one-time eddy current conductivity measurement of certain cabin and cargo compartment structural parts to determine if an incorrect aluminum alloy was used, and replacement of any affected part with a serviceable part. These documents are distinct because they apply to different parts on different airplanes. 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

We estimate that this AD affects 37 airplanes of U.S. registry.

We also estimate that it takes about 17 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$53,465, or \$1,445 per product.

In addition, we estimate that any on-condition repairs take about 45 work-hours and will require parts costing \$0, for a cost of \$3,825 per product. We have no way of determining the number of aircraft that might need these repairs.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all available costs in our 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

### Regulatory Findings

We 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. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. 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):

**2017–17–08 Airbus:** Amendment 39–18998; Docket No. FAA–2016–7264; Product Identifier 2015–NM–185–AD.

#### (a) Effective Date

This AD is effective October 2, 2017.

#### (b) Affected ADs

None.

#### (c) Applicability

This AD applies to the Airbus airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Airbus Model A330–201, –202, –203, –223, –223F, –243, –243F, –301, –302, –303, –321, –322, –323, –341, –342, and –343 airplanes, manufacturer serial numbers identified in Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016; and/or Airbus Service Bulletin A330–53–3262, including Appendixes 01 and 02, dated June 23, 2015.

(2) Airbus Model A340–541 and –642 airplanes, manufacturer serial numbers 1030, 1040, 1079, 1091, 1102, and 1122.

#### (d) Subject

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

#### (e) Reason

This AD was prompted by a quality control review on the final assembly line, which determined that the wrong aluminum alloy was used to manufacture several structural parts. We are issuing this AD to detect and replace structural parts made of an incorrect aluminum alloy. This condition could result in reduced structural integrity of the airplane.

#### (f) Compliance

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

#### (g) One-Time Measurement

Except as provided by paragraph (i) of this AD: Within 6 years after the effective date of this AD, but not exceeding 12 years since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness; do a one-time eddy current conductivity measurement of the cabin and cargo compartment structural parts identified in the "Affected Part Number" column of table 1 to paragraphs (g) and (h) of this AD to determine if an incorrect aluminum alloy was used, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD.

(1) For cargo compartment structural parts for Model A330 airplanes: Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.

(2) For cabin structural parts for Model A330 airplanes: Airbus Service Bulletin A330–53–3262, including Appendixes 01 and 02, dated June 23, 2015; except part number F5377004320300, which is located in the "cabin" area, but must be inspected in accordance with Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.

(3) For cargo compartment structural parts for Model A340 airplanes: Airbus Service Bulletin A340–53–5072, including Appendixes 01 and 02, dated June 23, 2015.

TABLE 1 TO PARAGRAPHS (g) AND (h) OF THIS AD—PARTS TO BE INSPECTED/INSTALLED

Affected part No.	Acceptable replacement part No.	Area
F5347126620600 ...	F5347126620000 ...	Cabin.
F5347126621000 ...	F5347126620400 ...	Cabin.
F5377004320300 ...	F5377004320351 ...	Cabin.
F5347170420400 ...	F5347170420400 ...	Cargo.
F5347170420600 ...	F5347170420600 ...	Cargo.
G53671313000000 ...	G53671313000000 ...	Cargo.
G5367173700000 ...	G5367173700000 ...	Cargo.
G5367173800000 ...	G5367173800000 ...	Cargo.

**(h) Replacement**

If during the inspection required by paragraph (g) of this AD, any affected part having a part number specified in table 1 to paragraphs (g) and (h) of this AD is found to have a measured value greater than that specified in Figure A–GFAAA, Sheet 02, “Inspection Flowchart,” of the applicable service information identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, except as provided by paragraph (i) of this AD: Within 6 years after the effective date of this AD, but not exceeding 12 years since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, replace the affected part with an acceptable replacement part having a part number specified in table 1 to paragraphs (g) and (h) of this AD, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD.

**(i) Exception to Certain Service Information**

Where Figure A–GFAAA, Sheet 02, “Inspection Flowchart,” of the service information identified in paragraphs (g)(2) and (g)(3) of this AD specifies to “do the conductivity ( $\sigma$ ) measurement with 60kHz (refer to Appendix 01)  $\sigma_{480} = \text{_____ MS/m}$ ,” the correct conductivity measurement is “ $\sigma_{60} = \text{_____ MS/m}$ .”

**(j) Additional Inspection for Certain Airplanes**

For Model A330 airplanes on which the inspection and replacement, as applicable, specified in paragraphs (g) and (h) of this AD were done before the effective date of this AD, in accordance with Airbus Service Bulletin A330–53–3261, dated June 23, 2015: Within 6 years after the effective date of this AD, but not exceeding 12 years since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, do a one-time eddy current conductivity measurement of structural parts having part number (P/N) G5367131300000, P/N G5367173700000, and P/N G5367173800000, located in fuselage section 15, in accordance with the “Additional Work” section of the Accomplishment Instructions of Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.

**(k) Replacement**

If during the inspection required by paragraph (j) of this AD, any affected part

having a part number specified in paragraph (j) of this AD is found to have a measured value greater than that specified in Figure A–GFAAA, Sheet 02, “Inspection Flowchart,” of Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016: Within 6 years after the effective date of this AD, but not exceeding 12 years since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, replace the affected part with an acceptable replacement part having a part number specified in table 1 to paragraphs (g) and (h) of this AD, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.

**(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Section, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@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 corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus’s EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: 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.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2017–0021, dated February 8, 2017, for related information.

This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA–2016–7264.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–1138; fax 425–227–1149.

**(n) 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.

(i) Airbus Service Bulletin A330–53–3261, Revision 01, including Appendixes 01, 02, and 03, dated November 10, 2016.

(ii) Airbus Service Bulletin A330–53–3262, including Appendixes 01 and 02, dated June 23, 2015.

(iii) Airbus Service Bulletin A340–53–5072, including Appendixes 01 and 02, dated June 23, 2015.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(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, call 202–741–6030, or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 9, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017–17536 Filed 8–25–17; 8:45 am]

**BILLING CODE 4910–13–P**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA–2017–0337; Product Identifier 2017–NM–006–AD; Amendment 39–19006; AD 2017–17–16]**

**RIN 2120–AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 767 airplanes. This AD was prompted by a report of cracking of the vertical stiffener in the nose wheel well. This AD requires repetitive inspections of the nose wheel well bulkhead stiffener for any cracking, and corrective actions if necessary. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0337.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0337; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, 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:** Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6447; fax: 425-917-6590; email: [wayne.lockett@faa.gov](mailto:wayne.lockett@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 767 airplanes. The NPRM published in the **Federal Register** on May 16, 2017 (82 FR 22443). The NPRM was prompted by a report of cracking of the vertical stiffener in the nose wheel well. The NPRM proposed to require repetitive inspections of the nose wheel well bulkhead stiffener for any cracking, and corrective actions if necessary. We are issuing this AD to detect and correct such cracking, which could adversely affect the structural integrity of the airplane and possibly lead to cabin depressurization or a nose landing gear collapse.

**Comments**

We 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. United Airlines and The Boeing Company supported the NPRM.

**Effect of Winglets on Accomplishment of the Proposed Actions**

Aviation Partners Boeing stated that accomplishing the supplemental type certificate (STC) ST01920SE does not affect the actions specified in the NPRM.

We concur with the commenter. We have redesignated paragraph (c) of the proposed AD (82 FR 22443, May 16,

2017) as paragraph (c)(1) and added paragraph (c)(2) to this AD to state that installation of STC ST01920SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01920SE 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.

**Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. We have determined that these minor changes:

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

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

**Related Service Information Under 1 CFR Part 51**

We reviewed Boeing Alert Service Bulletin 767-53A0275, dated January 5, 2017. The service information describes procedures for a detailed inspection and a medium frequency eddy current inspection of the nose wheel well bulkhead stiffener for any cracking, and corrective actions 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**

We estimate that this AD affects 144 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection .....	10 work-hour × \$85 per hour = \$850 per inspection cycle.	\$0	\$850 per inspection cycle.	\$122,400 per inspection cycle.

We estimate the following costs to do certain repairs that would be required

based on the results of the inspection. We have no way of determining the

number of aircraft that might need this repair:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Repair .....	18 work-hour × \$85 per hour = \$1,530 .....	\$0	\$1,530

We have received no definitive data that would enable us to provide cost estimates for other repairs 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**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) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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):

**2017–17–16 The Boeing Company:**  
 Amendment 39–19006; Docket No. FAA–2017–0337; Product Identifier 2017–NM–006–AD.

**(a) Effective Date**

This AD is effective October 2, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to The Boeing Company Model 767–200, –300, –300F, and –400ER series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017.

(2) Installation of Supplemental Type Certificate (STC) ST01920SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01920SE 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 53; Fuselage.

**(e) Unsafe Condition**

This AD was prompted by a report of cracking in the vertical stiffener in the nose

wheel well. We are issuing this AD to detect and correct such cracking, which could adversely affect the structural integrity of the airplane and possibly lead to cabin depressurization or a nose landing gear collapse.

**(f) Compliance**

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

**(g) Inspections**

At the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017, except as specified in paragraph (h)(1) of this AD: Do a detailed inspection and a medium frequency eddy current inspection of the nose wheel well bulkhead stiffener for any cracking, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017; except as specified in paragraph (h)(2) of this AD. Do all corrective actions before further flight. Repeat the inspections thereafter at the times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017.

**(h) Exceptions to the Service Information**

(1) Where Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) If any cracking is found and Boeing Alert Service Bulletin 767–53A0275, dated January 5, 2017, specifies to contact Boeing for appropriate action and specifies that action as “RC” (Required for Compliance): Before further flight repair 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) 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 Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, 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) Except as required by paragraph (h)(2) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (i)(4)(i) and (i)(4)(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 Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6447; fax: 425-917-6590; email: [wayne.lockett@faa.gov](mailto:wayne.lockett@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 Alert Service Bulletin 767-53A0275, dated January 5, 2017.

(ii) Reserved.

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

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 11, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017-17591 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

**[Docket No. FAA-2016-9518; Product Identifier 2015-NM-091-AD; Amendment 39-18989; AD 2017-16-12]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2013-19-09 and AD 2014-25-51, which applied to all Airbus Model A318, A319, A320, and A321 series airplanes. AD 2013-19-09 required replacing Angle of Attack (AOA) sensor conic plates with AOA sensor flat plates. AD 2014-25-51 required revising the airplane flight manual (AFM) to advise the flightcrew of emergency procedures for abnormal Alpha Protection (Alpha Prot). This new AD requires replacing certain AOA sensors; and doing a detailed inspection and a functional heating test for discrepancies on certain AOA sensors, and replacing the affected AOA sensors. This AD was prompted by a report indicating that a Model A321 airplane encountered a blockage of two AOA probes during climb, leading to activation of the Alpha Prot while the Mach number increased. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of November 6, 2013 (78 FR 60667, October 2, 2013).

**ADDRESSES:** For service information identified in this final rule, contact Airbus, Airworthiness Office—EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5

61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9518.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9518; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2013-19-09, Amendment 39-17591 (78 FR 60667, October 2, 2013) ("AD 2013-19-09"), and AD 2014-25-51, Amendment 39-18067 (80 FR 3153, January 22, 2015) ("AD 2014-25-51"). AD 2013-19-09 and AD 2014-25-51 applied to all Airbus Model A318, A319, A320, and A321 series airplanes. The NPRM published in the **Federal Register** on December 28, 2016 (81 FR 95531). The NPRM was prompted by a report indicating that an Airbus Model A321 airplane encountered a blockage of two AOA probes during climb, leading to activation of the Alpha Prot while the Mach number increased. The NPRM proposed to continue to require replacing AOA sensor conic plates with AOA sensor flat plates and revising the AFM to advise the flight crew of emergency procedures for abnormal Alpha Prot. The NPRM also proposed to

continue to require replacing certain AOA sensors; and doing a detailed inspection and a functional heating test for discrepancies on certain AOA sensors, and replacing the affected AOA sensors. We are issuing this AD to prevent a pitch down order due to abnormal activation of the Alpha Prot. An abnormal Alpha Prot, if not corrected, could result in loss of control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2015-0135, dated July 8, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for all Airbus Model A318, A319, A320, and A321 series airplanes. The MCAI states:

An occurrence was reported where an Airbus A321 aeroplane encountered a blockage of two Angle of Attack (AOA) probes during climb, leading to activation of the Alpha Protection (Alpha Prot) while the Mach number increased. The flight crew managed to regain full control and the flight landed uneventfully.

When Alpha Prot is activated due to blocked AOA probes, the flight control laws order a continuous nose down pitch rate that, in a worst case scenario, cannot be stopped with backward sidestick inputs, even in the full backward position. If the Mach number increases during a nose down order, the AOA value of the Alpha Prot will continue to decrease. As a result, the flight control laws will continue to order a nose down pitch rate, even if the speed is above minimum selectable speed, known as VLS.

This condition, if not corrected, could result in loss of control of the airplane.

Investigation results indicated that A320 family airplanes equipped with certain UTC Aerospace (UTAS, formerly known as Goodrich) AOA sensors, or equipped with certain SEXTANT/THOMSON AOA sensors, appear to have a greater susceptibility to adverse environmental conditions than airplanes equipped with the latest Thales AOA sensor, Part Number (P/N) C16291AB, which was designed to improve A320 airplane AOA indication behaviour in heavy rain conditions.

Having determined that replacement of these AOA sensors is necessary to achieve and maintain the required safety level of the airplane, EASA issued AD 2015-0087, retaining the requirements of EASA AD 2012-0236R1 [which corresponds to FAA AD 2013-06-03], [EASA] AD 2013-0022 (partially) [which corresponds to FAA AD 2013-19-09], and [EASA] AD 2014-0266-E [which corresponds to FAA AD 2014-25-51], which were superseded, and requiring modification of the airplanes by replacement of the affected P/N sensors, and, after modification, prohibiting (re-)installation of those P/N AOA sensors. That [EASA] AD also required repetitive detailed visual inspections (DET) and functional heating

tests of certain Thales AOA sensors and provided an optional terminating action for those inspections.

Since EASA AD 2015-0087 was issued, based on further analysis results, Airbus issued Operators Information Transmission (OIT) Ref. 999.0015/15 Revision 1, instructing operators to speed up the removal from service of UTAS P/N 0861ED2 AOA sensors.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2015-0087, which is superseded, but reduces the compliance times for airplanes with UTAS P/N 0861ED2 AOA sensors installed.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9518.

#### Comments

We 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. Air Line Pilots Association, International stated that it supported the NPRM.

#### Request To Revise Certain Exceptions

Airbus and Virgin America requested that the NPRM be revised to allow airplanes that have utilized FAA Alternative Methods of Compliance (AMOC) ANM-116-13-273R1 for probes having P/N C16291AB to be in compliance with the proposed requirements. Virgin America and Airbus stated that the language in paragraphs (l), (m)(2), (n), and (q) of the proposed AD conflict with the language specified in FAA AMOC ANM-116-13-273R1.

We agree to revise this AD to address the commenters' request. FAA AMOC ANM-116-13-273R1 is limited to certain serial numbers that have passed the inspection and test. We have revised paragraphs (l), (m)(2), (n), and (q) of this AD to clarify the exception in FAA AMOC ANM-116-13-273R1.

#### Request To Incorporate the Latest Service Information

Airbus requested that the latest service information be used in the AD and credit given for previous actions done before the effective date of this AD.

We agree to incorporate the latest service information in this AD. Accordingly, we have revised paragraph (g)(1) of this AD; the introductory text to paragraph (k) of this AD, and paragraphs (l)(1), (m), and (n) of this AD. For Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015; Airbus Service Bulletin A320-34-

1610, Revision 01, dated July 30, 2015; and Airbus Service Bulletin A320-34-1564, Revision 01, dated August 26, 2013; the changes are minor and do not add work to this AD. Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, describes procedures for inspecting, re-identifying, and testing certain AOA sensors, and does not add work to this AD. We have also revised paragraph (q) of this AD to give credit for previous actions done before the effective date of this AD using earlier versions of service information.

#### Request for Credit for Previous Actions

Virgin America requested that the FAA include Airbus Service Bulletin A320-34-1452, dated January 29, 2010 (as specified in paragraph (g) of AD 2013-06-03 to inspect and replace the affected probe P/N C16291AA with P/N C16291AB), in paragraph (q), "Credit for Previous Actions," of the proposed AD. Virgin America stated that these actions have resulted in installing compliant C16291AB probes in the affected positions prior to the effective date of the AD.

We disagree with Virgin America with allowing use of Airbus Service Bulletin A320-34-1452, dated January 29, 2010, for accomplishment of the installation of the probe P/N C16291AB. There are certain probe P/Ns C16291AB having a serial number specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, and these probes may not be installed unless they have been inspected and re-identified, and have passed a functional test, in accordance with the following service information:

- Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.
- Thales Service Bulletin C16291A-34-007, Revision 03, dated April 10, 2012.
- Thales Service Bulletin C16291A-34-007, Revision 02, dated December 16, 2011.
- Thales Service Bulletin C16291A-34-007, Revision 01, dated December 03, 2009.

#### Conclusion

We reviewed the available data, including 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. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM.

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

**Related Service Information Under 1 CFR Part 51**

We have reviewed the following Airbus service information:

- Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015. This service information describes procedures for performing a detailed inspection and a functional heating test for discrepancies on certain AOA sensors, and replacing the affected AOA sensors.
- Airbus Service Bulletin A320-34-1444, Revision 01, dated March 17,

2011. This service information describes procedures for replacing certain SEXTANT/THOMSON AOA sensors.

- Airbus Service Bulletin A320-34-1564, Revision 01, dated August 26, 2013. This service information describes procedures for installing AOA sensor plates having a certain part number.
- Airbus Service Bulletin A320-34-1610, Revision 01, dated July 30, 2015. This service information describes procedures for replacing certain UTAS AOA sensors.

We have reviewed the following Thales service information, which describes procedures for inspecting, re-identifying, and testing certain AOA sensors. These documents are distinct due to editorial revisions.

- Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

- Thales Service Bulletin C16291A-34-007, Revision 03, dated April 10, 2012.

- Thales Service Bulletin C16291A-34-007, Revision 02, dated December 16, 2011.

- Thales Service Bulletin C16291A-34-007, Revision 01, dated December 03, 2009.

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**

We estimate that this AD affects 959 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement (retained actions from AD 2013-19-09).	8 work-hours × \$85 per hour = \$680 .....	\$0 .....	\$680	\$652,120
Revising the AFM (retained actions from AD 2014-25-51).	1 work-hour × \$85 per hour = \$85 .....	\$0 .....	85	81,515
Replacement and Inspection (new action)	5 work-hours × \$85 per hour = \$425 .....	The parts cost is unavailable.	425	407,575

We estimate the following costs to do any necessary replacements that would

be required based on the results of the inspection. We have no way of

determining the number of aircraft that might need these replacements:

**ON-CONDITION COSTS**

Action	Labor cost	Parts cost	Cost per product
Replacement .....	5 work-hours × \$85 per hour = \$425 .....	The parts cost is unavailable .....	\$425

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**Regulatory Findings**

We 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:

- Is not a “significant regulatory action” under Executive Order 12866;
- Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
- Will not affect intrastate aviation in Alaska; and
- 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) 2013–19–09, Amendment 39–17591 (78 FR 60667, October 2, 2013); and AD 2014–25–51, Amendment 39–18067 (80 FR 3153, January 22, 2015); and adding the following new AD:

**2017–16–12 Airbus:** Amendment 39–18989; Docket No. FAA–2016–9518; Product Identifier 2015–NM–091–AD.

##### (a) Effective Date

This AD is effective October 2, 2017.

##### (b) Affected ADs

(1) This AD replaces AD 2013–19–09, Amendment 39–17591 (78 FR 60667, October 2, 2013) (“AD 2013–19–09”); and AD 2014–25–51, Amendment 39–18067 (80 FR 3153, January 22, 2015) (“AD 2014–25–51”).

(2) This AD affects AD 2013–06–03, Amendment 39–17399 (78 FR 19085, March 29, 2013) (“AD 2013–06–03”).

##### (c) Applicability

This AD applies to the Airbus airplanes listed in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, all manufacturer serial numbers.

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

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

(3) Airbus Model A320–211, –212, –214, –231, –232, and –233 airplanes.

(4) Airbus Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes.

##### (d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

##### (e) Reason

This AD was prompted by a report indicating that an Airbus Model A321 airplane encountered a blockage of two Angle of Attack (AOA) probes during climb, leading to activation of the Alpha Protection (Alpha Prot) while the Mach number increased. We are issuing this AD to prevent a pitch down order due to abnormal activation of the Alpha Prot. An abnormal Alpha Prot, if not corrected, could result in loss of control of the airplane.

##### (f) Compliance

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

##### (g) Retained New Flat Plate Installation, With Removed Post-Installation Requirement, Specific Delegation Approval Language, and New Service Information

This paragraph restates the requirements of paragraph (j) of AD 2013–19–09, with a removed post-installation requirement, specific delegation approval language, and revised service information. Within 5 months after November 6, 2013 (the effective date of AD 2013–19–09), remove all AOA sensor conic plates having part number (P/N) F3411060200000 or P/N F3411060900000, and install AOA sensor flat plates having P/Ns specified in paragraph (g)(1) or (g)(2) of this AD, except as specified in paragraph (h) of this AD. Install the AOA sensor plates in accordance with the applicable method specified in paragraph (g)(1) or (g)(2) of this AD.

(1) Install P/N D3411013520200 in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320–34–1564, including Appendix 01, dated January 25, 2013, or Airbus Service Bulletin A320–34–1564, Revision 01, dated August 26, 2013. As of the effective date of this AD, only Airbus Service Bulletin A320–34–1564, Revision 01, dated August 26, 2013, may be used for accomplishment of the actions required by this paragraph.

(2) Install P/N D3411007620000 or P/N D3411013520000, using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or

Airbus’s EASA Design Organization Approval (DOA).

##### (h) Retained Exception, With No Changes

This paragraph restates the exception provided by paragraph (k) of AD 2013–19–09, with no changes. An airplane on which Airbus modification 154863 (installation of AOA sensor flat plate) and modification 154864 (coating protection) have been embodied in production is not affected by the requirements of paragraph (g) of this AD, provided that, since first flight, no AOA sensor conic plate having P/N F3411060200000 or P/N F3411060900000 has been installed on that airplane.

##### (i) Retained Parts Installation Prohibition, With No Changes

This paragraph restates the requirements of paragraph (m) of AD 2013–19–09, with no changes.

(1) For any airplane that has AOA sensor flat plates installed: As of November 6, 2013 (the effective date of AD 2013–19–09), do not install any AOA sensor conic plate having P/N F3411060200000 or P/N F3411060900000, and do not use any AOA protection cover having P/N 98D34203003000.

(2) For any airplane that has AOA sensor conic plates installed: As of November 6, 2013 (the effective date of AD 2013–19–09), after modification of the airplane as required by paragraph (g) of this AD, do not install any AOA sensor conic plate having P/N F3411060200000 or P/N F3411060900000, and do not use any AOA protection cover having P/N 98D34203003000.

##### (j) Retained Revision of Airplane Flight Manual (AFM), With No Changes

This paragraph restates the requirements of paragraph (g) of AD 2014–25–51, with no changes. Within 2 days after February 6, 2015 (the effective date of AD 2014–25–51), revise the AFM to incorporate procedures to address undue activation of Alpha Prot by inserting the text specified in figure 1 to paragraph (j) of this AD into the Emergency Procedures section of the applicable AFM, to advise the flight crew of emergency procedures for abnormal Alpha Prot. This may be accomplished by inserting a copy of this AD into the AFM. When a statement identical to the text specified in figure 1 to paragraph (j) of this AD is included in the general revisions of the AFM, the general revisions may be inserted in the AFM, and the text specified in figure 1 to paragraph (j) of this AD may be removed.

**Figure 1 to paragraph (j) of this AD - AFM Procedure**

- **At any time, with a speed above VLS, if the aircraft goes to a continuous nose down pitch rate that cannot be stopped with backward sidestick inputs, immediately:**  
Keep on one ADR.  
Turn off two ADRs.
- **If the Alpha Max strip (red) hides completely the Alpha Prot strip (black and amber) in a stabilized wings-level flight path (without an increase in load factor):**  
Keep on one ADR.  
Turn off two ADRs.  
*In case of dispatch with one ADR inoperative, switch only one ADR to OFF.*

**CAUTION RISK OF ERRONEOUS DISPLAY OF THE VSW STRIP (RED AND BLACK)**

Consider using the Flight Path Vector (FPV).

- **If the Alpha Prot strip (black and amber) rapidly moves by more than 30 kt during flight maneuvers (with an increase in load factor), with AP ON and speed brakes retracted:**  
Keep on one ADR.  
Turn off two ADRs.  
*In case of dispatch with one ADR inoperative, switch only one ADR to OFF.*

**CAUTION RISK OF ERRONEOUS DISPLAY OF THE VSW STRIP (RED AND BLACK)**

Consider using the Flight Path Vector (FPV).

**(k) New Requirement of This AD:  
Replacement of Certain UTAS (Formerly  
Goodrich) AOA Sensors**

For airplanes on which any UTAS AOA sensor, P/N 0861ED or P/N 0861ED2, is installed: Within the applicable compliance times specified in paragraphs (k)(1), (k)(2), (k)(3), and (k)(4) of this AD, replace the affected Captain and First Officer AOA sensors with Thales AOA sensors, P/N C16291AB, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-34-1610, Revision 01, dated July 30, 2015.

(1) For Model A318 and A321 series airplanes on which any UTAS AOA sensor, P/N 0861ED, is installed: Replace within 7 months after the effective date of this AD.

(2) For Model A319 and A320 series airplanes on which any UTAS AOA sensor, P/N 0861ED, is installed: Replace within 22 months after the effective date of this AD.

(3) For Model A318 and A321 series airplanes on which any UTAS AOA sensor, P/N 0861ED2, is installed: Replace within 4 months after the effective date of this AD.

(4) For Model A319 and A320 series airplanes on which any UTAS AOA sensor, P/N 0861ED2, is installed: Replace within 7 months after the effective date of this AD.

**(l) New Requirement of This AD:  
Replacement of Certain SEXTANT/  
THOMSON AOA Sensors**

(1) For airplanes on which any SEXTANT/THOMSON AOA sensor, P/N 45150320 or P/N 16990568, is installed: Within the applicable compliance time specified in paragraphs (l)(1)(i) or (l)(1)(ii) of this AD, replace each SEXTANT/THOMSON AOA sensor, P/N 45150320 and P/N 16990568, with a Thales AOA sensor, P/N C16291AB, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-34-1444, Revision 01, dated March 17, 2011; except AOA sensor probes P/N C16291AB having a serial number specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, may not be installed unless the AOA probe sensors have been inspected and re-identified, and have passed a functional test, in accordance with the Thales service information specified in paragraphs (l)(2)(i), (l)(2)(ii), (l)(2)(iii), or (l)(2)(iv) of this AD.

(i) For Model A318 and A321 series airplanes on which any SEXTANT/THOMSON AOA sensor, P/N 45150320 or P/N 16990568, is installed: Replace within 7 months after the effective date of this AD.

(ii) For Model A319 and A320 series airplanes on which any SEXTANT/

THOMSON AOA sensor, P/N 45150320 or P/N 16990568, is installed: Replace within 22 months after the effective date of this AD.

(2) As specified in paragraph (l)(1) of this AD, use the following Thales service information specified in paragraphs (l)(2)(i), (l)(2)(ii), (l)(2)(iii), or (l)(2)(iv) of this AD.

(i) Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(ii) Thales Service Bulletin C16291A-34-007, Revision 03, dated April 10, 2012.

(iii) Thales Service Bulletin C16291A-34-007, Revision 02, dated December 16, 2011.

(iv) Thales Service Bulletin C16291A-34-007, Revision 01, dated December 03, 2009.

**(m) New Requirement of This AD:  
Functional Heating Test, and Corrective  
Action for Certain AOA Sensors**

For an airplane on which any Thales AOA sensor, P/N C16291AA, is installed: Before exceeding 5,200 flight hours accumulated by each affected Thales AOA sensor since its first installation on an airplane, or within 6 months after the effective date of this AD, whichever occurs later, do a functional heating test of each AOA sensor, P/N C16291AA, to determine the maximum current (Imax) value, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-34-1415, Revision 04,

dated July 30, 2015. If, during any functional heating test, any I<sub>max</sub> value is below the flow chart value as specified in Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015, before further flight, replace each discrepant AOA sensor with a sensor identified in paragraph (m)(1) or (m)(2) of this AD, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015. Repeat the functional heating test thereafter at intervals not to exceed 2,000 flight hours.

(1) Replace with a Thales AOA sensor, P/N C16291AA, that has passed a functional heating test as specified in the Accomplishment Instructions of Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015.

(2) Replace with a Thales AOA sensor, P/N C16291AB, except AOA sensor probes P/N C16291AB having a serial number specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, may not be installed unless the AOA probe sensors have been inspected and re-identified, and have passed a functional test, in accordance with the Thales service information specified in paragraphs (l)(2)(i), (l)(2)(ii), (l)(2)(iii), or (l)(2)(iv) of this AD.

#### (n) Optional Terminating Action

Modification of an airplane by replacing each Thales P/N C16291AA AOA sensor with a Thales P/N C16291AB AOA sensor, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-34-1444, Revision 01, dated March 17, 2011, terminates the repetitive functional heating tests required in paragraph (m) of this AD for that airplane; except AOA sensor probes P/N C16291AB having a serial number specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, may not be installed, unless the AOA probe sensors have been inspected and re-identified, and have passed a functional test, in accordance with the Thales service information specified in paragraphs (l)(2)(i), (l)(2)(ii), (l)(2)(iii), or (l)(2)(iv) of this AD.

#### (o) New Provisions of This AD: Airplanes Not Affected

An airplane with Airbus modification 150006 (installation of Thales P/N C16291AB AOA sensors), but without modification 26934 (installation of UTAS P/N 0861ED AOA sensors) embodied in production, is not affected by the requirements of paragraphs (k), (l), and (m) of this AD, provided it is determined that no AOA sensor having SEXTANT/THOMSON P/N 45150320 or 16990568, or UTAS P/N 0861ED or 0861ED2, has been installed on that airplane since its date of manufacture.

#### (p) New Requirement of This AD: Parts Installation Prohibitions

(1) As of the effective date of this AD: For an airplane on which only Thales AOA sensors, P/N C16291AB, are installed, do not install a Thales AOA sensor, P/N C16291AA, on that airplane. This parts installation prohibition terminates the requirements of

paragraph (i)(1) of AD 2013-06-03 for the airplanes identified in this paragraph.

(2) As of the effective date of this AD: For an airplane on which any combination of Thales AOA sensors, P/N C16291AA and Thales P/N C16291AB, is installed, do not install any SEXTANT/THOMSON AOA sensor, P/N 45150320 or 16990568, or UTAS AOA sensor, P/N 0861ED or 0861ED2, on that airplane.

(3) After modification of an airplane as required by paragraph (k) of this AD, do not install any AOA sensor with a part number specified in paragraphs (p)(3)(i) and (p)(3)(ii) of this AD on that airplane, with the exception that installation of a UTAS P/N 0861ED AOA sensor is allowed in the standby position of that airplane.

(i) SEXTANT/THOMSON AOA sensors, P/N 45150320 and P/N 16990568.

(ii) UTAS AOA sensors, P/N 0861ED and P/N 0861ED2.

#### (q) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraph (k) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-34-1610, dated March 31, 2015.

(2) This paragraph provides credit for the actions required by paragraph (l) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-34-1444, dated October 7, 2009; except AOA sensor probes P/N C16291AB having a serial number specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, may not be installed unless the AOA probe sensors have been inspected and re-identified, and have passed a functional test, using the Thales service information specified in paragraphs (l)(2)(i), (l)(2)(ii), (l)(2)(iii), or (l)(2)(iv) of this AD.

(3) This paragraph provides credit for the actions required by paragraph (m) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-34-1415, Revision 03, July 8, 2010.

#### (r) Acceptable Parts

Installation of a version (part number) of an AOA sensor approved after the effective date of this AD is an approved method of compliance with the requirements of paragraph (k), (l), or (m) of this AD, as applicable, provided the requirements specified in paragraphs (r)(1) and (r)(2) of this AD are met.

(1) The version (part number) must be approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus's EASA DOA.

(2) The installation must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus's EASA DOA.

#### (s) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards 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 International Branch, send it to the attention of the person identified in paragraph (u)(2) of this AD. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@faa.gov).

(i) 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.

(ii) AMOCs approved previously for AD 2013-19-09 are approved as AMOCs for the corresponding provisions of paragraphs (g), (h), (i), and (t)(1) of this AD.

(iii) AMOCs approved previously for AD 2014-25-51 are approved as AMOCs for the corresponding provisions of paragraph (j) of this AD.

(2) *Contacting the Manufacturer*: As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

#### (t) Retained Provisions for Special Flight Permits

(1) For the requirements of paragraphs (g), (h), and (i) of this AD: Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified (if the operator elects to do so), provided Airbus A318/A319/A320/A321 TR TR286, Issue 1.0, dated December 17, 2012, has been inserted into the Emergency Procedures of the Airbus A318/A319/A320/A321 AFM.

(2) For the requirements of paragraphs (j) of this AD: Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified (if the operator elects to do so), provided the revision required by paragraph (j) of this AD has been done.

#### (u) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2015-0135, dated July 8, 2015, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9518.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (v)(5) and (v)(6) of this AD.

#### (v) 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 October 2, 2017.

(i) Airbus Service Bulletin A320-34-1415, Revision 04, dated July 30, 2015.

(ii) Airbus Service Bulletin A320-34-1444, Revision 01, dated March 17, 2011.

(iii) Airbus Service Bulletin A320-34-1564, Revision 01, dated August 26, 2013.

(iv) Airbus Service Bulletin A320-34-1610, Revision 01, dated July 30, 2015.

(v) Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(vi) Thales Service Bulletin C16291A-34-007, Revision 03, dated April 10, 2012.

(vii) Thales Service Bulletin C16291A-34-007, Revision 02, dated December 16, 2011.

(viii) Thales Service Bulletin C16291A-34-007, Revision 01, dated December 03, 2009.

(4) The following service information was approved for IBR on November 6, 2013, Amendment 39-17591 (78 FR 60667, October 2, 2013).

(i) Airbus Mandatory Service Bulletin A320-34-1564, including Appendix 01, dated January 25, 2013.

(ii) Reserved.

(5) For service information identified in this AD, contact Airbus, Airworthiness Office—ELAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(6) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) 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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 2, 2017.

**Jeffrey E. Duven,**

Director, System Oversight Division, Aircraft Certification Service.

[FR Doc. 2017-16860 Filed 8-25-17; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2017-0652; Product Identifier 2017-NE-18-AD; Amendment 39-18997; AD 2017-17-07]

RIN 2120-AA64

#### Airworthiness Directives; Rolls-Royce plc Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Rolls-Royce plc (RR) Trent XWB-75, Trent XWB-79, Trent XWB-79B, and Trent XWB-84 turbofan engines. This AD requires inspection of the intermediate-pressure (IP) turbine stage 2 locking plates. This AD was prompted by a report of several IP turbine stage 2 locking plates cracked during module assembly. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD becomes effective September 12, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 12, 2017.

We must receive comments on this AD by October 12, 2017.

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- **Mail:** U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- **Hand Delivery:** Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- **Fax:** 202-493-2251.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp);

Internet: <https://customers.rolls-royce.com/public/rollsroycecare>. You may view this service information at the FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA 01803. For information on the

availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0652.

#### Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0652; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Robert Green, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: [robert.green@faa.gov](mailto:robert.green@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2017-0652; Directorate Identifier 2017-NE-18-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD.

##### Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2017-0088, dated May 16, 2017 (referred to hereinafter as "the MCAI"), to correct an

unsafe condition for the specified products. The MCAI states:

During module assembly, cracking was observed on several intermediate pressure (IP) turbine stage 2 locking plates from one particular supplier. These locking plates form part of the IP turbine stage 2 assembly, providing axial retention of the IP turbine stage 2 blades onto the disk, and constitute a seal for the local air system. These locking plates are pre-bent during manufacture and are pressed flat during installation such that they fit between grooves in the IP stage 2 disk and blades. There are 16 locking plates, Part Number (P/N) KH12922 or P/N KH16183, installed on an IP turbine stage 2 assembly. It is possible that parts, manufactured by this supplier, may have cracked during module assembly, without those cracks being detectable prior to release to service of an engine. Propagation of cracks during engine operation may lead to loss of a locking plate. Missing locking plates will allow hot gas ingestion which will locally overheat the blade retention features of the disk.

This condition, if not detected and corrected, could lead to accelerated fatigue of the blade retention features of the disk and release of one or more IP turbine stage 2 blades, possibly resulting in high energy uncontained debris release from the engine,

with consequent damage to, and reduced control of, the aeroplane.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0652.

**Related Service Information Under 1 CFR Part 51**

RR has issued Alert Non-Modification Service Bulletin (NMSB) Trent XWB 72-AJ738, dated April 11, 2017. The NMSB describes procedures to inspect the IP turbine stage 2 locking plates. 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 and Requirements of This AD**

This product has been approved by the aviation authority of EASA, and is approved for operation in the United States. Pursuant to our bilateral

agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This AD requires inspection of the IP turbine stage 2 locking plates.

**FAA’s Determination of the Effective Date**

No domestic operators use this product. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists for making this amendment effective in less than 30 days.

**Costs of Compliance**

We estimate that this AD affects 0 engine installed on airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection .....	3 work-hours × \$85 per hour = \$255 .....	\$0	\$255	\$0

**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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness

Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

**Regulatory Findings**

We 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 this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) 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):

**2017-17-07 Rolls-Royce plc:** Amendment 39-18997; Docket No. FAA-2017-0652; Product Identifier 2017-NE-18-AD.

**(a) Effective Date**

This AD is effective September 12, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce plc (RR) Trent XWB-75, Trent XWB-79, Trent XWB-79B, and Trent XWB-84 turbofan engines with an engine serial number (S/N) listed in Appendix 1 of RR Alert Non-Modification Service Bulletin (NMSB) Trent XWB 72-AJ738, dated April 11, 2017, and with intermediate-pressure (IP) turbine stage 2 locking plates, part number (P/N) KH12922 or KH16183, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) 7250, Turbine/Turboprop Engine/Turbine Section.

**(e) Reason**

This AD was prompted by a report of several IP turbine stage 2 locking plates cracked during module assembly. We are issuing this AD to prevent failure of the IP turbine stage 2 locking plates, uncontained release of the IP turbine stage 2 blades, damage to the engine, and damage to the airplane.

**(f) Compliance**

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

(1) Inspect the IP turbine stage 2 locking plates on-wing before exceeding 750 engine flight cycles (FCs) since new, or within 100 engine FCs after the effective date of this AD, whichever occurs later. Use the Accomplishment Instructions, paragraph 3.A., of RR Alert NMSB Trent XWB 72-AJ738, dated April 11, 2017, to do the inspection.

(2) Thereafter, re-inspect the IP turbine stage 2 locking plates at intervals not to exceed 750 engine FCs since the last locking plate inspection. Use the Accomplishment Instructions, paragraph 3.A., of RR Alert NMSB Trent XWB 72-AJ738, dated April 11, 2017, to do the inspection.

(i) If all IP turbine stage 2 locking plates installed on the engine have an S/N beginning with 20452, or are not marked with an S/N, the repetitive inspection required by paragraph (f)(2) of this AD is not required.

(ii) If one or more IP turbine stage 2 locking plates are missing, remove the engine from service within the compliance times specified in the Accomplishment Instructions, paragraph 3.A.(3), of RR Alert NMSB Trent XWB 72-AJ738, dated April 11, 2017.

(3) Inspect the IP turbine stage 2 locking plates during the next engine shop visit (ESV) after the effective date of this AD.

(i) Use the Accomplishment Instructions, paragraph 3.B., of RR Alert NMSB Trent XWB 72-AJ738, dated April 11, 2017, to do this inspection. This in-shop inspection may be substituted for the on-wing inspection required by paragraphs (f)(1) and (2) of this AD.

(ii) If one or more IP turbine stage 2 locking plates are missing, use the acceptance criteria in the Accomplishment Instructions,

paragraph 3.B.(3), of RR Alert NMSB Trent XWB 72-AJ738 dated April 11, 2017, to disposition the engine.

**(g) Installation Prohibition**

After the effective date of this AD, do not install an engine unless the IP turbine stage 2 locking plates were inspected using the Accomplishment Instructions, paragraph 3.A. or 3.B., of RR Alert NMSB Trent XWB 72-AJ738, dated April 11, 2017.

**(h) Definition**

For the purpose of this AD, an ESV is when the engine is subject to a serviceability check and repair, rebuild, or overhaul.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, FAA, ECO Branch, Compliance and Airworthiness Division, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: [ANE-AD-AMOC@faa.gov](mailto: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 Robert Green, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: [robert.green@faa.gov](mailto:robert.green@faa.gov).

(2) Refer to MCAI European Aviation Safety Agency AD 2017-0088, dated May 16, 2017, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2017-0642.

**(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) Rolls-Royce plc (RR) Alert Non-Modification Service Bulletin Trent XWB 72-AJ738, dated April 11, 2017.

(ii) Reserved.

(3) For RR service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp); Internet: <https://customers.rolls-royce.com/public/rollsroycecare>.

(4) You may view this service information at FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on

the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on August 16, 2017.

**Robert J. Ganley,**

Manager, Engine and Propeller Standards Branch, Aircraft Certification Service.

[FR Doc. 2017-18133 Filed 8-25-17; 8:45 am]

BILLING CODE 4910-13-P

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

[Docket No. FAA-2017-0472; Product Identifier 2016-NM-148-AD; Amendment 39-19002; AD 2017-17-12]

RIN 2120-AA64

**Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A310-203, -221, -222, -304, -322, -324, and -325 airplanes. This AD was prompted by an evaluation by the design approval holder indicating that the wing bottom skin at the main landing gear (MLG) reinforcing plate is subject to widespread fatigue damage (WFD). This AD requires a modification of the wing bottom skin at the MLG reinforcing plate. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0472.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0472; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Dan Rodina, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-2125; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A310-203, -221, -222, -304, -322, -324, and -325 airplanes. The NPRM published in the **Federal Register** on May 19, 2017 (82 FR 22904) (“the NPRM”). The NPRM was prompted by an evaluation by the design approval holder indicating that the wing bottom skin at the MLG reinforcing plate is subject to WFD. The NPRM proposed to require a modification of the wing bottom skin at the MLG reinforcing plate. We are issuing this AD to prevent multi-site damage in the bottom skin at the MLG

reinforcing plate, which could result in reduced structural integrity of the wing. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2016-0170, dated August 19, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A310-203, -221, -222, -304, -322, -324, and -325 airplanes. The MCAI states:

In response to the FAA Part 26 rule, wing structural items of the Airbus A310 design that are deemed potentially susceptible to Widespread Fatigue Damage (WFD) have been assessed. The bottom skin at the main landing gear (MLG) reinforcing plate has been highlighted as an area susceptible to Multi Site Damage (MSD).

This condition, if not corrected, could reduce the structural integrity of the wing. Airbus performed a detailed widespread fatigue damage tolerance analysis of the bottom skin at the MLG reinforcing plate, and concluded that a modification is necessary to the fastener holes at the inboard edge of the reinforcing plate forward of the rear spar. The modification consists of inspection [related investigative actions of a check and a rotating probe inspection] and a first oversize of the critical holes on the first two rows of fasteners [and corrective actions, e.g., repair]. Airbus modification 13751 was introduced and Service Bulletin (SB) A310-57-2104 was issued to provide in-service modification instructions. The accomplishment of this modification at the specified time will recondition/renovate/extend the life of the fastener holes in the bottom skin at the MLG reinforcing plate and prevent the development of MSD up to the Extended Service Goal (ESG).

For the reasons described above, this [EASA] AD requires certain modifications to the wing bottom skin at the MLG reinforcing plate, forward of the wing rear spar [including related investigative actions of a check and a rotating probe inspection and corrective actions, e.g., repair].

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0472.

**Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

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

**Related Service Information Under 1 CFR Part 51**

Airbus has issued Service Bulletin A310-57-2104, dated December 15, 2015. This service information describes procedures for modification of the left-hand and right-hand wing bottom skin at the MLG reinforcing plate, including related investigative actions and applicable corrective 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**

We estimate that this AD affects 8 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification .....	52 work-hours × \$85 per hour = \$4,420 .....	\$12,000	\$16,420	\$131,360

**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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs

applicable to transport category airplanes to the Director of the System Oversight Division.

### Regulatory Findings

We 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. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. 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):

**2017–17–12 Airbus:** Amendment 39–19002; Docket No. FAA–2017–0472; Product Identifier 2016–NM–148–AD.

#### (a) Effective Date

This AD is effective October 2, 2017.

#### (b) Affected ADs

None.

#### (c) Applicability

This AD applies to Airbus Model A310–203, –221, –222, –304, –322, –324, and –325 airplanes, certificated in any category, all manufacturer serial numbers.

#### (d) Subject

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

#### (e) Reason

This AD was prompted by an evaluation by the design approval holder indicating that the wing bottom skin at the main landing gear (MLG) reinforcing plate is subject to widespread fatigue damage. We are issuing this AD to prevent multi-site damage in the bottom skin at the MLG reinforcing plate, which could result in reduced structural integrity of the wing.

#### (f) Compliance

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

#### (g) Modification

Within the compliance times defined in table 1 to paragraph (g) of this AD, table 2 to paragraph (g) of this AD, or table 3 to paragraph (g) of this AD, as applicable to airplane type and utilization: Do a modification of the left-hand and right-hand wing bottom skin at the MLG reinforcing plate, including all related investigative actions and applicable corrective actions, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310–57–2104, dated December 15, 2015, except as required by paragraph (h) of this AD. Do all related investigative and applicable corrective actions before further flight. For the purpose of this AD, the term “short range” applies to airplanes with an average flight time (AFT) lower than 1.5 flight hours per flight cycle, and the term “long range” applies to airplanes with an average flight time equal to or higher than 1.5 flight hours per flight cycle. For determining the “short range” and “long range” airplanes, the AFT is the total accumulated flight hours, counted from take-off to touch-down, divided by the total accumulated flight cycles at the effective date of this AD.

TABLE 1 TO PARAGRAPH (g) OF THIS AD—MODEL A310–200 SERIES AIRPLANES

Compliance time (whichever occurs later, A or B)
A Before exceeding 28,800 flight cycles (FC) or 57,600 flight hours (FH), whichever occurs first since first flight of the airplane.
B Within 960 FC, or 1,920 FH, or 12 months, whichever occurs first after the effective date of this AD.

TABLE 2 TO PARAGRAPH (g) OF THIS AD—MODEL A310–300 “SHORT-RANGE” AIRPLANES

Compliance time (whichever occurs later, A or B)
A Before exceeding 27,700 FC or 77,700 FH, whichever occurs first since first flight of the airplane.
B Within 920 FC, or 2,580 FH, or 12 months, whichever occurs first after the effective date of this AD.

TABLE 3 TO PARAGRAPH (g) OF THIS AD—MODEL A310–300 “LONG-RANGE” AIRPLANES

Compliance time (whichever occurs later, A or B)
A Before exceeding 20,500 FC or 102,500 FH, whichever occurs first since first flight of the airplane.
B Within 680 FC, or 3,420 FH, or 12 months, whichever occurs first after the effective date of this AD.

#### (h) Exception to Service Information Specifications

Where Airbus Service Bulletin A310–57–2104, dated December 15, 2015, specifies to contact Airbus for appropriate action, and specifies that action as “RC” (Required for Compliance): Before further flight, accomplish corrective actions in accordance with the procedures specified in paragraph (i)(2) of this AD.

#### (i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards 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 International Section, send it to the attention of the person identified in paragraph (j)(2) of this AD. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@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 corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus’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 (h) 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.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0170, dated August 19, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0472.

(2) For more information about this AD, contact Dan Rodina, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-2125; fax 425-227-1149.

**(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 this AD specifies otherwise.

(i) Airbus Service Bulletin A310-57-2104, dated December 15, 2015.

(ii) Reserved.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 9, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017-17537 Filed 8-25-17; 8:45am]

**BILLING CODE 4910-13-P**

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

**[Docket No. FAA-2017-0512; Product Identifier 2017-NM-031-AD; Amendment 39-19005; AD 2017-17-15]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc., Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This AD was prompted by reports of failures of the landing gear alternate-extension system. This AD requires replacement of certain nose landing gear and main landing gear electro-mechanical actuators. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone: 1-514-855-2999; fax: 514-855-7401; email: [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet: <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0512.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0512; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7318; fax: 516-794-5531.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The NPRM published in the **Federal Register** on June 2, 2017 (82 FR 25545) (“the NPRM”). The NPRM was prompted by reports of failures of the landing gear alternate-extension system (AES). The NPRM proposed to require replacement of certain nose landing gear and main landing gear electro-mechanical actuators. We are issuing this AD to prevent failure of the landing gear AES and consequent landing with some or all of the landing gear not extended.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2017-08, dated February 22, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The MCAI states:

Malfunctions of the landing gear Alternate-Extension System (AES) have been experienced. Failure of the landing gear AES could prevent the landing gear from extending in the case of a failure of the primary landing gear extension system.

This [Canadian] AD is issued to mandate the replacement of the [nose landing gear] NLG and [main landing gear] MLG [electro-mechanical actuators] EMA [part numbers] P/Ns BA698-85006-1 and BA698-85007-1.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0512.

**Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

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

**Related Service Information Under 1 CFR Part 51**

Bombardier, Inc., has issued Service Bulletin 670BA-32-047, Revision A, dated December 5, 2016. The service information describes procedures for replacing certain nose landing gear and

main landing gear electro-mechanical actuators. 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**

We estimate that this AD will affect 39 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement .....	4 work-hours × \$85 per hour = \$340 .....	Not available .....	\$340	\$13,260

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all available costs in our 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**Regulatory Findings**

We 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. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. 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):

**2017-17-15 Bombardier, Inc.:** Amendment 39-19005; Docket No. FAA-2017-0512; Product Identifier 2017-NM-031-AD.

**(a) Effective Date**

This AD is effective October 2, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series

1000) airplanes, certificated in any category, serial numbers 19001 through 19039 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by failures of the landing gear alternate-extension system (AES). We are issuing this AD to prevent failure of the landing gear AES and consequent landing with some or all of the landing gear not extended.

**(f) Compliance**

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

**(g) Replacement**

Within 1,200 flight hours or 12 months after the effective date of this AD, whichever occurs first: Replace the nose landing gear (NLG) and main landing gear (MLG) electro-mechanical actuators (EMAs) having part numbers (P/Ns) BA698-85006-1 and BA698-85007-1 with P/Ns BA698-85006-3 and BA698-85007-3, as applicable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-047, Revision A, dated December 5, 2016 (“670BA-32-047, Revision A”). Where 670BA-32-047, Revision A, instructs operators to contact Bombardier if it is not possible to complete all the instructions in 670BA-32-047, Revision A, because of the configuration of the airplane, this AD requires that any deviation from the instructions provided in 670BA-32-047, Revision A, must be approved as an alternative method of compliance (AMOC) under the provisions of paragraph (j)(1) of this AD.

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may install an NLG or MLG EMA having P/N BA698-85006-1 or BA698-85007-1, on any airplane.

**(i) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 670BA-32-047, dated February 28, 2014.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York 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 ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7300; fax: 516-794-5531. 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 corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2017-08, dated February 22, 2017, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0512.

(2) For more information about this AD, contact Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7318; fax: 516-794-5531.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (l)(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 this AD specifies otherwise.

(i) Bombardier Service Bulletin 670BA-32-047, Revision A, dated December 5, 2016.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone: 1-514-855-2999; fax: 514-855-7401; email: [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet: <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 10, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017-17590 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

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

**[Docket No. FAA-2017-0479; Product Identifier 2016-NM-202-AD; Amendment 39-19004; AD 2017-17-14]**

**RIN 2120-AA64**

**Airworthiness Directives; Saab AB, Saab Aeronautics (Formerly Known as Saab AB, Saab Aerosystems) Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Saab AB, Saab Aeronautics Model 340A (SAAB/SF340A) airplanes. This AD was prompted by the discovery of circuit breakers of unsuitable strength that fail to protect the system from an overcurrent. This AD requires replacing certain circuit breakers. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Saab AB, Saab Aeronautics, SE-581 88, Linköping, Sweden; telephone +46 13 18 5591; fax +46 13 18 4874; email [saab340techsupport@saabgroup.com](mailto:saab340techsupport@saabgroup.com); Internet <http://www.saabgroup.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue

SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0479.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0479; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Shahram Daneshmandi, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1112; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:****Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Saab AB, Saab Aeronautics Model 340A (SAAB/SF340A) airplanes. The NPRM published in the **Federal Register** on May 22, 2017 (82 FR 23158) (“the NPRM”).

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2016-0234, dated November 24, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for Saab AB, Saab Aeronautics Model 340A (SAAB/SF340A) airplanes. The MCAI states:

Circuit breakers of an unsuitable strength have been found installed on SAAB SF340A aeroplanes, failing in protecting the system from an overcurrent.

This condition, if not corrected, could lead to the overheating of wires, possibly resulting in smoke or fire on the aeroplane.

To address this potential unsafe condition, Saab issued [service bulletin] SB 340-33-058 (later revised) to provide instructions for replacement of circuit breakers.

For the reason described above, this [EASA] AD requires replacement of circuit

breakers of unsuitable strength in the passenger reading light system.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0479.

**Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the

public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

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

**Related Service Information Under 14 CFR Part 51**

We reviewed Saab Service Bulletin 340-33-058, Revision 01, dated October 21, 2016. The service information describes procedures for replacing any circuit breaker having part number (P/

N) MS3320-10 installed at position 2LJ (L25) and position 4LJ (L26) with a circuit breaker having P/N MS3320-7-5. 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**

We estimate that this AD affects 19 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement .....	2 work-hours × \$85 per hour = \$170 .....	\$220	\$390	\$7,410

**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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**Regulatory Findings**

We 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. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. 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):

**2017-17-14 Saab AB, Saab Aeronautics (Formerly Known as Saab AB, Saab Aerosystems):** Amendment 39-19004; Docket No. FAA-2017-0479; Product Identifier 2016-NM-202-AD.

**(a) Effective Date**

This AD is effective October 2, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Saab AB, Saab Aeronautics Model 340A (SAAB/SF340A) airplanes, certificated in any category, serial numbers 004 through 138 inclusive; except those on which Saab Service Bulletin 340-33-053 (modification/removal for cargo/freighter configuration) has been embodied.

**(d) Subject**

Air Transport Association (ATA) of America Code 33, Lights.

**(e) Reason**

This AD was prompted by the discovery of circuit breakers of unsuitable strength that fail to protect the system from an overcurrent. We are issuing this AD to prevent such conditions, which could lead to overheating of the wires and possibly result in smoke or fire in the airplane.

**(f) Compliance**

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

**(g) Replacement**

Within 6 months after the effective date of this AD: Replace any circuit breaker having part number (P/N) MS3320-10 installed at position 2LJ (L25) and position 4LJ (L26) with a circuit breaker having P/N MS3320-7-5, in accordance with the Accomplishment

Instructions of Saab Service Bulletin 340–33–058, Revision 01, dated October 21, 2016.

#### (h) Parts Installation Prohibition

As of the effective date of this AD, no person may install a circuit breaker having P/N MS3320–10 on any passenger reading light system at position 2LJ (L25) or position 4LJ (L26), on any airplane.

#### (i) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Saab Service Bulletin 340–33–058, dated May 30, 2016.

#### (j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Section, send it to the attention of the person identified in paragraph (k)(2) of this AD. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@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 corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Saab AB, Saab Aeronautics' EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

#### (k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016–0234, dated November 24, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA–2017–0479.

(2) For more information about this AD, contact Shahram Daneshmandi, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–1112; fax 425–227–1149.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (l)(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 this AD specifies otherwise.

(i) Saab Service Bulletin 340–33–058, Revision 01, dated October 21, 2016.

(ii) Reserved.

(3) For service information identified in this AD, contact Saab AB, Saab Aeronautics, SE–581 88, Linköping, Sweden; telephone +46 13 18 5591; fax +46 13 18 4874; email [saab340techsupport@saabgroup.com](mailto:saab340techsupport@saabgroup.com); Internet <http://www.saabgroup.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(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, call 202–741–6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 9, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017–17589 Filed 8–25–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

**[Docket No. FAA–2017–0481; Product Identifier 2016–NM–196–AD; Amendment 39–19003; AD 2017–17–13]**

**RIN 2120–AA64**

#### **Airworthiness Directives; Bombardier, Inc., Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD–100–1A10 airplanes. This AD was prompted by reports of low clearance in the aft equipment bay between auxiliary power unit (APU) generator power cables and a hydraulic line, which can cause damage to wire insulation. This AD requires an inspection of the APU generator power cables and the adjacent hydraulic line for damage, and repair, if necessary; and modification of the APU generator power cable installation. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 2, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514–855–5000; fax 514–855–7401; email [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA–2017–0481.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA–2017–0481; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800–647–5527) is Docket Management Facility, 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:** Assata Dessaline, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7301; fax 516–794–5531.

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model BD–100–1A10 airplanes. The NPRM published in the **Federal Register** on May 19, 2017 (82 FR 22913) (“the NPRM”). The NPRM was prompted by reports of low clearance in the aft equipment bay between APU generator power cables and a hydraulic line, which can cause damage to wire insulation. The NPRM proposed to require an inspection of the APU generator power cables and the adjacent hydraulic line for damage, and repair, if necessary; and modification of the APU

generator power cable installation. We are issuing this AD to prevent electrical arcing from power cables, which could cause a fire in the aft equipment bay.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2016-28, dated September 15, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model BD-100-1A10 airplanes. The MCAI states:

Low clearance between the APU generator power cables and a hydraulic return line was found in the Aft Equipment Bay (AEB) on some aeroplanes in service. Absence of clearance can cause damage to the insulation of the wire, which can lead to a fault in the APU electrical system or arcing with the metallic hydraulic return line and could cause a fire in the AEB.

This [Canadian] AD is issued to mandate an [general visual] inspection [for damage] of the APU generator power cables and the hydraulic return line, [and repair, if necessary] and a modification of the clamp arrangement to give sufficient clearance

between the power cables and the hydraulic return line.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0481.

**Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

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

**Related Service Information Under 1 CFR Part 51**

We reviewed Bombardier Service Bulletin 100-24-28, dated July 27, 2016; and Bombardier Service Bulletin 350-24-003, dated July 27, 2016. This service information describes procedures for the inspection of the APU generator power cables and adjacent hydraulic line for damage, and repair, if necessary; and modification of the APU generator power cable installation. These documents are distinct since they apply to different airplane configurations. 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**

We estimate that this AD affects 162 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect and modify cables .....	1 work-hour × \$85 per hour = \$85 .....	( <sup>1</sup> )	\$85	\$13,770

<sup>1</sup> We have received no definitive data that would enable us to provide cost estimates for the parts cost associated with the modification specified in this AD.

We estimate the following costs to do any necessary repairs that would be

required based on the results of the inspection. We have no way of

determining the number of aircraft that might need these repairs:

**ON-CONDITION COSTS**

Action	Labor cost	Parts cost	Cost per product
Repair .....	Up to 5 work-hours × \$85 per hour = Up to \$425 .....	( <sup>1</sup> )	Up to \$425.

<sup>1</sup> We have received no definitive data that would enable us to provide cost estimates for the parts cost associated with the repair specified in this AD.

According to the manufacturer, all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service,

as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**Regulatory Findings**

We 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. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. 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):

**2017-17-13 Bombardier, Inc.:** Amendment 39-19003; Docket No. FAA-2017-0481; Product Identifier 2016-NM-196-AD.

#### (a) Effective Date

This AD is effective October 2, 2017.

#### (b) Affected ADs

None.

#### (c) Applicability

This AD applies to Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 through 20635 inclusive.

#### (d) Subject

Air Transport Association (ATA) of America Code 24, Electrical power.

#### (e) Reason

This AD was prompted by reports of low clearance in the aft equipment bay between auxiliary power unit (APU) generator power cables and a hydraulic line, which can cause damage to wire insulation. We are issuing this AD to prevent electrical arcing from power cables, which could cause a fire in the aft equipment bay.

#### (f) Compliance

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

#### (g) Inspection of APU Generator Power Cables and Hydraulic Line, Repairs, and Modification

Within 24 months after the effective date of this AD, do the applicable actions required by paragraph (g)(1) or (g)(2) of this AD.

(1) For airplanes having serial numbers 20003 through 20500 inclusive: Do a general visual inspection of the APU generator power cables and the adjacent hydraulic line for damage, and do all applicable repairs; and modify the APU generator power cable installation; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-24-28, dated July 27, 2016, except as required by paragraph (h) of this AD. Do all applicable repairs before further flight.

(2) For airplanes having serial numbers 20501 through 20635 inclusive: Do a general visual inspection of the APU generator power cables and the adjacent hydraulic line for damage, and do all applicable repairs; and modify the APU generator power cable installation; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 350-24-003, dated July 27, 2016, except as required by paragraph (h) of this AD. Do all applicable repairs before further flight.

#### (h) Exception to the Service Information

Where Bombardier Service Bulletin 100-24-28, dated July 27, 2016; and Bombardier Service Bulletin 350-24-003, dated July 27, 2016, specify to contact the manufacturer for repair, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO).

#### (i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, New York 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 ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. 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 corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or Bombardier, Inc.'s TCCA

DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

#### (j) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2016-28, dated September 15, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0481.

(2) For more information about this AD, contact Assata Dessaline, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7301; fax 516-794-5531.

#### (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 this AD specifies otherwise.

(i) Bombardier Service Bulletin 100-24-28, dated July 27, 2016.

(ii) Bombardier Service Bulletin 350-24-003, dated July 27, 2016.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 9, 2017.

**Dionne Palermo,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017-17588 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA-2017-0296; Airspace Docket No. 17-ACE-7]

#### Amendment of Class E Airspace; Oskaloosa, IA

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This action modifies Class E airspace extending upward from 700 feet above the surface at Oskaloosa Municipal Airport, Oskaloosa, IA, to accommodate new standard instrument approach procedures for instrument flight rules (IFR) operations at the airport. This action is necessary due to the decommissioning of the Oskaloosa non directional radio beacon (NDB), and cancellation of the NDB approach procedure, and enhances the safety and management of IFR operations at the airport.

**DATES:** Effective 0901 UTC, December 7, 2017. 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 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal-regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Walter Tweedy, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222-5900.

**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 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 amends Class E airspace extending upward from 700 feet above the surface at Oskaloosa Municipal Airport, Oskaloosa, IA, to support IFR operations in standard instrument approach procedures at the airport.

**History**

The FAA published in the **Federal Register** (82 FR 24271, May 26, 2017) Docket No. FAA-2017-0296 a notice of proposed rulemaking (NPRM) to modify Class E airspace extending upward from 700 feet above the surface at Oskaloosa Municipal Airport, Oskaloosa, IA. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

**Availability and Summary of Documents for Incorporation by Reference**

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

**The Rule**

This amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 amends Class E airspace extending upward from 700 feet above the surface within a 6.4-mile radius of Oskaloosa Municipal Airport, Oskaloosa, IA, to accommodate new standard instrument approach procedures for IFR operations at the airport. The segment within 2.6 miles each side of the 018° bearing from the Oskaloosa NDB extending from the 6.4-mile radius to 7 miles north of the NDB is removed due to the decommissioning of the NDB and cancellation of the NDB approach procedure. This action enhances the safety and management of the standard instrument approach procedures for IFR operations at the airport.

**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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, would 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 qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures," paragraph 5-6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

**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 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

**§ 71.1 [Amended]**

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

Paragraph 6005 Class E Airspace Areas  
Extending Upward From 700 Feet or More  
Above the Surface of the Earth.

\* \* \* \* \*

#### ACE IA E5 Oskaloosa, IA [Amended]

Oskaloosa Municipal Airport, IA  
(Lat. 41°13'34" N., long 92°29'38" W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of Oskaloosa Municipal Airport, excluding that airspace within the Ottumwa, IA Class E airspace area.

Issued in Fort Worth, Texas, on August 18, 2017.

**Christopher L. Southerland,**

Acting Manager, Operations Support Group,  
ATO Central Service Center.

[FR Doc. 2017-18107 Filed 8-25-17; 8:45 am]

BILLING CODE 4910-13-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA-2017-0182; Airspace  
Docket No. 17-ASW-3]

#### Amendment of Class E Airspace; Arkadelphia, AR

**AGENCY:** Federal Aviation  
Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This action amends Class E airspace extending upward from 700 feet above the surface at Dexter B. Florence Memorial Field Airport, Arkadelphia, AR. This action is necessary due to the decommissioning of the Arkadelphia non-directional radio beacon (NDB) and cancellation of the NDB approach. This action enhances the safety and management of standard instrument approach procedures for instrument flight rules (IFR) operations at the airport. This action also, updates the airport name in the legal description from Arkadelphia Municipal Airport to Dexter B. Florence Memorial Field Airport.

**DATES:** Effective 0901 UTC, December 7, 2017. 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 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal-regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Rebecca Shelby, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222-5857.

#### 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 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 amends Class E airspace extending upward from 700 feet above the surface at Dexter B. Florence Memorial Field Airport, Arkadelphia, AR, in support of standard instrument approach procedures for IFR operations at the airport.

##### History

On April 20, 2017, the FAA published in the **Federal Register** (82 FR 18600) Docket No. FAA-2017-0182, a notice of proposed rulemaking (NPRM) to modify Class E airspace extending upward from 700 feet above the surface at Dexter B. Florence Memorial Field Airport, Arkadelphia, AR. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations

listed in this document will be published subsequently in the Order.

#### Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

#### The Rule

This amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 amends Class E airspace extending upward from 700 feet above the surface within a 6.6-mile radius to 6.5 miles and removing the 5.2-mile wide segment (2.6 miles each side of the 222° bearing) from the Arkadelphia RBN extending from the 6.6-mile radius to 10.7 miles southwest of the Dexter B. Florence Memorial Field Airport (updated in the legal description from Arkadelphia Municipal Airport).

Airspace reconfiguration is necessary due to the decommissioning and cancellation of the Arkadelphia NDB and NDB approaches, which would enhance the safety and management of the standard instrument approach procedures for IFR operations at the airport.

#### 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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental

Policy Act in accordance with FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures," paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

#### Lists 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

##### **ASW AR E5 Arkadelphia, AR [Amended]**

Dexter B. Florence Memorial Field Airport, AR

(Lat. 34°05'59" N., long. 93°03'58" W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of Dexter B. Florence Memorial Field Airport.

Issued in Fort Worth, Texas, on August 16, 2017.

**Walter Tweedy,**

*Acting Manager, Operations Support Group, ATO Central Service Center.*

[FR Doc. 2017–17882 Filed 8–25–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA–2017–0165; Airspace Docket No. 17–ACE–1]

#### **Amendment of Class E Airspace; West Plains, MO**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This action modifies Class E airspace extending upward from 700 feet above the surface at West Plains Regional Airport (formerly West Plains Municipal Airport), West Plains, MO, to accommodate new standard instrument approach procedures for instrument flight rules (IFR) operations at the airport. This action is necessary due to the decommissioning of the Hutton (HUU) VHF omnidirectional range (VOR), and cancellation of the VOR approach. This action enhances the safety and management of IFR operations at the airport. The airport name will also be updated.

**DATES:** Effective 0901 UTC, December 7, 2017. 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 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741–6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal-regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

#### **FOR FURTHER INFORMATION CONTACT:**

Walter Tweedy, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222–5900.

## 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 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 supports standard instrument approach procedures for IFR operations at the airport.

### History

The FAA published a notice of proposed rulemaking in the **Federal Register** (FR 82 16140, April 3, 2017), Docket No. FAA–2017–0165, to modify Class E airspace extending upward from 700 feet above the surface at West Plains Regional Airport, West Plains, MO. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. One comment was received in support of the proposal.

Except for editorial changes, this rule remains the same from the NPRM.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

### Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

### The Rule

This amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 modifies Class E airspace extending upward from 700 feet above the surface to within a 6.5-mile (from a 6.9-mile) radius of West Plains Regional Airport,

West Plains, MO, and removes the segment extending 10 miles south from the Hutton VOR/DME due to the decommissioning of the VOR, and cancellation of the VOR approach. The airport name is changed from West Plains Municipal Airport to West Plains Regional Airport. This action enhances the safety and management of the standard instrument approach procedures for IFR operations at the airport.

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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, would 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 qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures," paragraph 5-6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

#### 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 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

#### **§ 71.1 [Amended]**

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

#### **ACE MO E5 West Plains, MO [Amended]**

West Plains Regional Airport, MO  
(Lat. 36°52'42" N., long. 91°54'10" W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of West Plains Regional Airport.

Issued in Fort Worth, Texas on August 18, 2017.

**Christopher Southerland,**

*Acting Manager, Operations Support Group,  
ATO Central Service Center.*

[FR Doc. 2017-18115 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 71**

[Docket No. FAA-2017-0722; Airspace Docket No. 17-AGL-16]

#### **Amendment of Class E Airspace; Mason, MI**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This action amends the airspace description of Class E airspace extending upward from 700 feet or more above the surface at Mason Jewett Field, Mason, MI, removing the exclusionary language contained in the airspace description referencing Skyway Estates Airport, Eaton Rapids, MI, and to bring the airspace description in compliance with FAA Order 7400.2L, Procedures for Handling Airspace Matters.

**DATES:** Effective 0901 UTC, December 7, 2017. 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 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at <http://www.faa.gov/>

[air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Jeffrey Claypool, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222-5711.

#### **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 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 amends the airspace description of Class E airspace extending upward from 700 feet or more above the surface at Mason Jewett Field, Mason, MI.

#### **History**

The FAA published in the **Federal Register** (82 FR 19007, April 25, 2017) a notice of proposed rulemaking to remove Class E airspace at Skyway Estates Airport, Eaton Rapids, MI, as standard instrument approach procedures have been cancelled and controlled airspace is no longer required. The exclusionary language referencing Eaton Rapids, MI, is being removed from the airspace description for Mason Jewett Field, Mason, MI. This is an administrative change to bring the airspace description into compliance with FAA Order 7400.2L.

Class E airspace designations are published in paragraph 6005 of FAA

Order 7400.11A dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

#### Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

#### The Rule

This action amends Title 14, Code of Federal Regulations (14 CFR) part 71 by removing the exclusionary language that reads “excluding that airspace within the Eaton Rapids, MI, Class E airspace area” from the regulatory text of the Class E airspace extending upward from 700 feet or more above the surface at Mason Jewett Field, Mason, MI.

Section 553(b)(3)(B) of the Administrative Procedures Act (5 U.S.C.) authorizes agencies to dispense with notice and comment procedure when the agency for “good cause” finds that these procedures are “impracticable, unnecessary, or contrary to the public interest.” This is an administrative change amending the description for Mason Jewett Field, Mason, MI, by removing the exclusionary language from the description and does not affect the boundaries, or operating requirements of the airspace; therefore, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

#### 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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when

promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures,” paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

#### Lists 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

#### AGL MI E5 Mason, MI [Amended]

Mason Jewett Field, MI  
(Lat. 42°33'57" N., long. 84°25'24" W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of the Mason Jewett Field.

Issued in Fort Worth, Texas, on August 16, 2017.

#### Walter Tweedy,

*Acting Manager, Operations Support Group, ATO Central Service Center.*

[FR Doc. 2017–17886 Filed 8–25–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA–2017–0184; Airspace Docket No. 17–ASW–5]

#### Amendment of Class E Airspace; Pauls Valley, OK

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This action modifies Class E airspace extending up to 700 feet above the surface at Pauls Valley Municipal Airport, Pauls Valley, OK. Airspace reconfiguration is necessary due to the decommissioning of the Pauls Valley non-directional radio beacon (NDB), and cancellation of the NDB approach. This action enhances the safety and management of standard instrument approach procedures for instrument flight rules (IFR) operations at the airport.

**DATES:** Effective 0901 UTC, December 7, 2017. 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 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741–6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Walter Tweedy, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222–5900.

**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 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 amends Class E airspace extending upward from 700 feet above the surface at Pauls Valley Municipal Airport, Pauls Valley, OK, in support of standard instrument approach procedures for IFR operations at the airport.

### History

The FAA published in the **Federal Register** (82 FR 17778 April 13, 2017) Docket No. FAA-2017-0184, a notice of proposed rulemaking (NPRM) to modify Class E airspace extending upward from 700 feet above the surface at Pauls Valley Municipal Airport, Pauls Valley, OK. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. Subsequent to publication, the FAA found that the title for Class E airspace in paragraph 6005 of FAA Order 7400.11A was incomplete, and is corrected in this rule. The Class E airspace designations listed in this document will be published subsequently in the Order.

### Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

### The Rule

This amendment to Title 14 Code of Federal Regulations (14 CFR) part 71

amends Class E airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Pauls Valley Municipal Airport, Pauls Valley, OK. The segment 2.6 miles each side of the 169° bearing from the Pauls Valley NDB extending from the 6.6-mile radius to 7.6 miles south of the airport is removed due to the decommissioning of the Pauls Valley NDB, and cancellation of the NDB approach. This action enhances the safety and management of the standard instrument approach procedures for IFR operations at the airport.

Also, the title for paragraph 6005, as published in FAA Order 7400.11A, is corrected from "Class E Airspace Areas" to "Class E Airspace Areas Extending Upward from 700 feet or More Above the Surface of the Earth".

### 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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, would 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 qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures," paragraph 5-6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

### 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 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

#### § 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

#### ASW OK E5 Pauls Valley, OK [Amended]

Pauls Valley Municipal Airport, OK  
(Lat. 34°42'34" N., long. 97°13'24" W.)

That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Pauls Valley Municipal Airport, and within 4 miles each side of the 000° bearing from the airport extending from the 6.6-mile radius to 11.6 miles north of the airport.

Issued in Fort Worth, Texas, on August 18, 2017.

**Christopher Southerland,**  
*Acting Manager, Operations Support Group,*  
*ATO Central Service Center.*

[FR Doc. 2017-18114 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 33 CFR Part 100

[Docket No. USCG-2017-0753]

#### Special Local Regulation; Olympia Harbor Days Tug Boat Races, Budd Inlet, WA

**AGENCY:** Coast Guard, DHS.

**ACTION:** Notice of enforcement of regulation.

**SUMMARY:** The Coast Guard will enforce Special Local Regulations for the Olympia Harbor Days Tug Boat Races, Budd Inlet, WA from 11 a.m. through 5 p.m. on September 3, 2017. This action

is necessary to restrict vessel movement within the specified race area immediately prior to, during, and immediately after racing activity in order to ensure the safety of participants, spectators and the maritime public. Entry into, transit through, mooring or anchoring within the specified race area is prohibited unless authorized by the Captain of the Port Puget Sound or Designated Representatives.

**DATES:** The regulations in 33 CFR 100.1309 will be enforced from 11 a.m. through 5 p.m. on September 3, 2017.

**FOR FURTHER INFORMATION CONTACT:** If you have questions about this notice of enforcement, call or email Petty Officer Zachary Spence, Sector Puget Sound Waterways Management Division, U.S. Coast Guard; telephone 206-217-6051, email [SectorPugetSoundWWM@uscg.mil](mailto:SectorPugetSoundWWM@uscg.mil).

**SUPPLEMENTARY INFORMATION:** The Coast Guard will enforce Special Local Regulations for Olympia Harbor Days Tug Boat Races, Budd Inlet, WA in 33 CFR 100.1309 on September 3, 2017, from 11 a.m. until 5 p.m.

The following area is specified as a race area: All waters of Budd Inlet, WA the width of the navigation channel south of a line connecting the following points: 47°05.530' N., 122°55.844' W. and 47°05.528' N., 122°55.680' W. until reaching the northernmost end of the navigation channel at a line connecting the following points: 47°05.108' N., 122°55.799' W. and 47°05.131' N., 122°55.659' W. then southeasterly until reaching the southernmost entrance of the navigation channel at a line connecting the following points: 47°3.946' N., 122°54.577' W., 47°04.004' N., 122° 4.471' W.

Under the provisions of 33 CFR 100.1309, the regulated area shall be closed immediately prior to, during and immediately after the event to all persons and vessels not participating in the event and authorized by the event sponsor. This action is necessary to ensure the safety of participants, spectators and the maritime public. Entry into, transit through, mooring or anchoring within the specified race area is prohibited unless authorized by the Captain of the Port Puget Sound or Designated Representatives. All persons or vessels who desire to enter the race area while it is enforced must obtain permission from the on-scene patrol craft on VHF channel 13.

This notice of enforcement is issued under authority of 33 CFR 100.1309 and 5 U.S.C. 552 (a). In addition to this document in the **Federal Register**, the Coast Guard will provide the maritime

community with advance notification of this enforcement period via the Local Notice to Mariners. If the Captain of the Port determines that the regulated area need not be enforced for the full duration stated in this notice, she may use a Broadcast Notice to Mariners to grant general permission to enter the regulated area.

Dated: August 22, 2017.

**Linda A. Sturgis,**

*Captain, U.S. Coast Guard, Captain of the Port Puget Sound.*

[FR Doc. 2017-18138 Filed 8-25-17; 8:45 am]

**BILLING CODE 9110-04-P**

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 33 CFR Part 117

[Docket No. USCG-2017-0231]

#### Drawbridge Operation Regulation; Hutchinson River, New York, NY

**AGENCY:** Coast Guard, DHS.

**ACTION:** Notice of temporary deviation from drawbridge regulation; modification.

**SUMMARY:** The Coast Guard has modified a temporary deviation from the operating schedule that governs the Hutchinson River Parkway Bridge across the Hutchinson River, mile 0.9 at New York, New York. This deviation is necessary to complete application of protective coating on the bridge as well as maintenance of operating machinery. This modified deviation allows the bridge to remain in the closed-to-navigation position for periods of up to two weeks in order to expedite work efforts.

**DATES:** This deviation is effective without actual notice from August 28, 2017 through 12:01 a.m. on September 29, 2017. For the purposes of enforcement, actual notice will be used from 12:01 a.m. on August 22, 2017 until August 28, 2017.

**ADDRESSES:** The docket for this deviation, USCG-2017-0231 is available at <http://www.regulations.gov>. Type the docket number in the "SEARCH" box and click "SEARCH." Click on Open Docket Folder on the line associated with this deviation.

**FOR FURTHER INFORMATION CONTACT:** If you have questions on this modified temporary deviation, call or email James M. Moore, Bridge Management Specialist, First District Bridge Branch, U.S. Coast Guard; telephone 212-514-4334, email [james.m.moore2@uscg.mil](mailto:james.m.moore2@uscg.mil).

**SUPPLEMENTARY INFORMATION:** The New York City Department of Transportation, the owner of the bridge, requested a temporary deviation from the normal operating schedule to facilitate application of protective coating to the bridge as well as maintenance of operating machinery. The Hutchinson River Parkway Bridge, across the Hutchinson River, mile 0.9 at New York, New York has a vertical clearance of 30 feet at mean high water and 38 feet at mean low water in the closed position. The existing drawbridge operating regulations are listed at 33 CFR 117.793(b).

On May 1, 2017, the Coast Guard published a temporary deviation entitled "Drawbridge Operation Regulation; Hutchinson River, New York, NY" in the **Federal Register** (82 FR 20257). On July 6, 2017, the Coast Guard published a modified temporary deviation entitled "Drawbridge Operation Regulation; Hutchinson River, New York, NY" in the **Federal Register** (82 FR 31254). Under that modified temporary deviation, the draw of the Hutchinson River Parkway Bridge would remain closed to navigation for a period not to exceed 14 days; the draw would then open for vessels in accordance with established operating regulations for a period not to exceed 7 days, after which the cycle would repeat. Between September 1, 2017 and September 29, 2017, the draw would remain closed to navigation for a period not to exceed 7 days; the draw would then open for vessels in accordance with established operation regulations for another 7 days, after which the cycle would repeat.

In the interest of expediting work efforts and closing the project out this year, the New York City Department of Transportation has requested that between August 18, 2017 and September 29, 2017 the draw of the Hutchinson River Parkway Bridge remain closed to navigation for a period not to exceed 14 days; the draw will then open for vessels in accordance with established operating regulations for a period not to exceed 7 days, after which the cycle will repeat.

Vessels that can pass under the bridge without an opening may do so at all times. The bridge will not be able to open for emergencies. There is no alternate route for vessels to pass.

The Coast Guard will also inform the users of the waterways through our Local and Broadcast Notices to Mariners of the change in operating schedule for the bridge so that vessel operators can arrange their transit to minimize any impact caused by the temporary deviation.

In accordance with 33 CFR 117.35(e), the drawbridge must return to its regular operating schedule immediately at the end of the effective period of this temporary deviation. This deviation from the operating regulations is authorized under 33 CFR 117.35.

Dated: August 22, 2017.

**Christopher J. Bisignano,**

*Supervisory Bridge Management Specialist,  
First Coast Guard District.*

[FR Doc. 2017-18145 Filed 8-25-17; 8:45 am]

**BILLING CODE 9110-04-P**

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 33 CFR Part 117

[Docket No. USCG-2017-0806]

#### Drawbridge Operation Regulation; Southern Branch of the Elizabeth River, Chesapeake, VA

**AGENCY:** Coast Guard, DHS.

**ACTION:** Notice of deviation from drawbridge regulation.

**SUMMARY:** The Coast Guard has issued a temporary deviation from the operating schedule that governs the I-64 (High Rise) Bridge across the Atlantic Intracoastal Waterway, Southern Branch of the Elizabeth River, mile 7.1, at Chesapeake, VA. The deviation is necessary to facilitate routine maintenance. This deviation allows the bridge to remain in the closed-to-navigation position.

**DATES:** The deviation is effective from 4 a.m. through 5:30 a.m. on August 27, 2017.

**ADDRESSES:** The docket for this deviation, [USCG-2017-0806] is available at <http://www.regulations.gov>. Type the docket number in the "SEARCH" box and click "SEARCH". Click on Open Docket Folder on the line associated with this deviation.

**FOR FURTHER INFORMATION CONTACT:** If you have questions on this temporary deviation, call or email Mr. Martin Bridges, Bridge Administration Branch Fifth District, Coast Guard, telephone 757-398-6422, email [Martin.A.Bridges@uscg.mil](mailto:Martin.A.Bridges@uscg.mil).

**SUPPLEMENTARY INFORMATION:** The Virginia Department of Transportation, owner and operator of the I-64 (High Rise) Bridge across the Atlantic Intracoastal Waterway, Southern Branch of the Elizabeth River, mile 7.1, at Chesapeake, VA, has requested a temporary deviation from the current operating regulation set out in 33 CFR

117.997(e), to facilitate rigging equipment into the bascule pits.

Under this temporary deviation, the bridge will remain in the closed-to-navigation position from 4 a.m. through 5:30 a.m. on August 27, 2017. The drawbridge has two spans, each with double-leaf bascule draws, and both spans have a vertical clearance in the closed-to-navigation position of 65 feet above mean high water.

The Atlantic Intracoastal Waterway, Southern Branch of the Elizabeth River is used by a verity of vessels including recreational vessels, tug and barge traffic, small fishing vessels, and small commercial vessels. The Coast Guard has carefully considered the nature and volume of vessel traffic on the waterway in publishing this temporary deviation.

The channel will be closed to all traffic from 4 a.m. through 4:30 a.m. and from 5 a.m. through 5:30 a.m. on August 27, 2017. Vessels able to pass through the bridge in the closed position from 4:30 a.m. through 5 a.m. may do so. The bridge spans will not be able to open in case of an emergency and there is no immediate alternate route for vessels to pass. The Coast Guard will also inform the users of the waterway through our Local Notice and Broadcast Notices to Mariners of the change in operating schedule for the bridge so that vessel operators can arrange their transits to minimize any impact caused by the temporary deviation.

In accordance with 33 CFR 117.35(e), the drawbridge must return to its regular operating schedule immediately at the end of the effective period of this temporary deviation. This deviation from the operating regulations is authorized under 33 CFR 117.35.

Dated: August 22, 2017.

**Hal R. Pitts,**

*Bridge Program Manager, Fifth Coast Guard District.*

[FR Doc. 2017-18160 Filed 8-25-17; 8:45 am]

**BILLING CODE 9110-04-P**

## DEPARTMENT OF VETERANS AFFAIRS

### 38 CFR Part 36

RIN 2900-AC85

#### Loan Guaranty: Loans To Purchase Manufactured Homes; Correction

**AGENCY:** Department of Veterans Affairs.

**ACTION:** Correcting amendments.

**SUMMARY:** On July 14, 1993, the Department of Veterans Affairs (VA) published a final rule in the **Federal Register** amending its manufactured

home loan guaranty regulations to comply with certain provisions of the Veterans' Home Loan Program Improvements and Property Rehabilitation Act of 1987. That document erred in redesignating certain paragraphs in the regulatory provision pertaining to maximum loan amounts and terms. This document corrects that final rule.

**DATES:** Effective on August 28, 2017.

**FOR FURTHER INFORMATION CONTACT:** Erica Lewis, Management Analyst, Loan Guaranty Service (26A1), Veterans Benefits Administration, Department of Veterans Affairs, 810 Vermont Avenue NW., Washington DC 20420, (202) 632-8823. (This is not a toll-free number.)

**SUPPLEMENTARY INFORMATION:** On July 14, 1993, VA published a final rule in the **Federal Register**, 58 FR 37857-37861, amending its manufactured home loan guaranty regulations to comply with certain provisions of the Veterans' Home Loan Program Improvements and Property Rehabilitation Act of 1987. Public Law 100-198, 101 Stat. 1315. VA amended 38 CFR 36.4204 by redesignating certain paragraphs within that section. 58 FR 37857-37859. These amendments effectually created two paragraph (d) designations in § 36.4204. See 38 CFR 36.4204. This document corrects that final rule. This document also corrects a minor punctuation error occurring in the newly redesignated paragraph (f).

Specifically, VA is correcting § 36.4204 to redesignate paragraphs (e), (f), and (g) as (f), (g), and (h) and redesignate the current second (d) paragraph as new paragraph (e).

#### List of Subjects in 38 CFR Part 36

Condominiums, Loan programs—housing and community development, Manufactured homes, Veterans.

Dated: August 18, 2017.

**Jeffrey Martin,**

*Office Program Manager, Office of Regulation Policy & Management, Office of the Secretary, Department of Veterans Affairs.*

For the reasons stated in the preamble, the Department of Veterans Affairs corrects 38 CFR part 36 as set forth below:

#### PART 36—LOAN GUARANTY

■ 1. The authority citation for part 36 continues to read as follows:

**Authority:** 38 U.S.C. 501 and 3720.

#### § 36.4204 [Amended]

■ 2. In § 36.4204:

■ a. Redesignate paragraphs (e), (f), and (g) as paragraphs (f), (g), and (h);

- b. Redesignate the current second (d) paragraph as new paragraph (e); and
- c. Remove the semicolon at the end of the newly redesignated paragraph (f) introductory text and add a colon in its place.

[FR Doc. 2017-18037 Filed 8-25-17; 8:45 am]

BILLING CODE 8320-01-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R04-OAR-2017-0004; FRL-9966-94-Region 4]

### Air Plan Approval; Kentucky; Revisions to Jefferson County Emissions Monitoring and Reporting

**AGENCY:** Environmental Protection Agency.

**ACTION:** Final rule.

**SUMMARY:** On March 22, 2011, and April 20, 2011, the Commonwealth of Kentucky, through the Kentucky Division for Air Quality (KDAQ), submitted revisions to the Kentucky State Implementation Plan (SIP) on behalf of the Louisville Metro Air Pollution Control District (District). The Environmental Protection Agency (EPA) is approving the April 20, 2011, submittal and the portions of the March 22, 2011, submittal concerning changes to the District's stationary source emissions monitoring and reporting requirements because the Commonwealth has demonstrated that these changes are consistent with the Clean Air Act (CAA or Act).

**DATES:** This rule will be effective September 27, 2017.

**ADDRESSES:** EPA has established a docket for this action under Docket Identification No. EPA-R04-OAR-2017-0004. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information may not be publicly available, *i.e.*, Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air Regulatory Management Section, Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW.,

Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday 8:30 a.m. to 4:30 p.m., excluding federal holidays.

**FOR FURTHER INFORMATION CONTACT:**

Richard Wong, Air Regulatory Management Section, Air Planning and Implementation Branch, Pesticides and Toxics Management Division, Region 4, U.S. Environmental Protection Agency, 61 Forsyth Street SW., Atlanta, Georgia 30303-8960. Mr. Wong can be reached by phone at (404) 562-8726 or via electronic mail at [wong.richard@epa.gov](mailto:wong.richard@epa.gov).

**SUPPLEMENTARY INFORMATION:**

#### I. Background

In this rulemaking, EPA is approving certain changes related to the District's stationary source emissions monitoring and reporting requirements in Regulation 1.06<sup>1</sup> in the March 22, 2011, and April 20, 2011, SIP revisions. This regulation provides the District with the authority to require emissions monitoring at stationary sources and requires certain sources to maintain emissions records and provide annual emissions statements to the District. It does not impose any emissions limits or control requirements on any emissions source. The March 22, 2011, submission also included changes to Jefferson County Regulation 1.02—*Definitions*; Regulation 3.01—*Ambient Air Quality Standards*; Regulation 3.02—*Applicability of Ambient Air Quality Standards*; Regulation 3.03—*Definitions*; Regulation 3.04—*Ambient Air Quality Standards*; and Regulation 3.05—*Methods of Measurement*. EPA approved these changes, with the exception of the requested addition of certain definitions in Regulation 1.02, on December 6, 2016 (81 FR 87815).<sup>2</sup> The March 22, 2011, submission also included changes to Regulation 1.07—*Emissions During Startups, Shutdowns,*

<sup>1</sup> In 2003, the City of Louisville and Jefferson County governments merged and the "Jefferson County Air Pollution Control District" was renamed the "Louisville Metro Air Pollution Control District." However, each of the regulations in the Jefferson County portion of the Kentucky SIP still has the subheading "Air Pollution Control District of Jefferson County." Thus, to be consistent with the terminology used in the SIP, EPA refers throughout this notice to regulations contained in Jefferson County portion of the Kentucky SIP as the "Jefferson County" regulations.

<sup>2</sup> EPA did not approve the addition of definitions for the terms "acute noncancer effect," "cancer," "carcinogen," and "chronic noncancer effect," because these definitions are not related to the National Ambient Air Quality Standards (NAAQS). See 81 FR 87815.

*Malfunctions and Emergencies*. EPA approved the changes to Regulation 1.07 on June 10, 2014 (79 FR 33101). The April 20, 2011, submission revises only Regulation 1.06.

## II. EPA's Analysis of Kentucky's SIP Revisions

### A. March 22, 2011, Submittal

The March 22, 2011, SIP submission contains a version of Regulation 1.06 adopted by the District on June 21, 2005 (referred to as "Version 7" by the District) and a version of Regulation 1.06 adopted by the District on September 21, 2005 (referred to as "Version 8"). The version currently incorporated into the SIP is referred to as "Version 6" (District effective on December 15, 1993). See 65 FR 53660 (October 23, 2001). Collectively, Versions 7 and 8 change the heading of Regulation 1.06 to "Stationary Source Self-Monitoring, Emissions Inventory Development, and Reporting," and change aspects of Section 1—"In Stack Self-Monitoring and Reporting" (including a change in the title to "In-Stack Self-Monitoring and Reporting"); Section 2—"Ambient Air Monitoring"; and Section 3—"Emissions and Related Data Reporting" (including a change in the title to "Provisions for Section 4 and Section 5 Emissions Data"). The submission adds four new sections: Section 4—"Emissions Data for Criteria Pollutants, HAPs, and Ammonia"; Section 5—"Enhanced Emissions Data for Toxic Air Contaminants"; Section 6—"Certification by a Responsible Official"; and Section 7—"Confidentiality and Open Records Requirements." The changes to the heading of Regulation 1.06, the changes to Sections 1 and 2, and the addition of Sections 6 and 7 are administrative in nature. The changes to Section 3 modify and add provisions regarding emissions reporting data requirements, methods of emissions calculations, and stationary source emissions statements, and remove outdated reporting dates; the addition of Section 4 details requirements for submitting emissions statements on an annual basis for particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, ozone precursor emissions of volatile organic compounds and oxides of nitrogen, ammonia, and hazardous air pollutants; and Section 5 contains requirements for enhanced emissions statements for listed "toxic air contaminants." Because the reporting of toxic air contaminants is not related to the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants, EPA is not acting on Section

5.<sup>3</sup> EPA is approving the changes to Regulation 1.06 contained in the March 22, 2011, SIP revision, with the exception of Section 5 and references to Section 5 located in Section 3, to the extent that these changes are not superseded by the changes in the April 20, 2011, submittal discussed below.

#### B. April 20, 2011, Submittal

The April 20, 2011, SIP submission contains a version of Regulation 1.06 adopted by the District on January 19, 2011 (referred to as “Version 9” by the District). After acknowledging that the District had sent Versions 7 and 8 to Kentucky for submittal to EPA, the District requests that EPA incorporate Version 9 into the SIP and identifies changes in Regulation 1.06 between Version 8 and Version 9. Version 9 revises Version 8 by changing aspects of Section 1 (including a change in the title to “Stack Monitoring and Reporting”); Section 2 (including a change in title to “Ambient Air Monitoring and Reporting”); Section 3 (including a change in the title to “Requirements for Section 4 and Section 5 Emissions Statements”); Section 4 (including a change in the title to “Emissions Statements for Criteria Pollutants, HAPs, and Ammonia”); Section 5 (including a change to the title to “Emissions Statements for Toxic Air Contaminants”); and Section 6. Version 9 also eliminates Section 7. The submitted changes clarify and streamline the monitoring, recordkeeping, and reporting requirements for stationary sources by deleting and combining redundant and outdated provisions. The changes to Section 4 also modify the emissions threshold for sources to submit annual emissions statements to the District. For the reasons discussed above, EPA is not acting on Section 5 or on the references to Section 5 located in Section 3.

EPA has determined that the changes to Regulation 1.06 in the March 22, 2011, and April 20, 2011, SIP submissions are consistent with the CAA. The text of the regulation in the SIP will reflect Version 9, with the exception of Section 5 and any references to Section 5 located in Section 3.

In a notice of proposed rulemaking (NPRM) published on June 29, 2017 (82 FR 29467), EPA proposed to approve the changes to Regulation 1.06 in the March 22, 2011, and April 20, 2011, SIP submissions as described above. The rationale for EPA’s actions are further

explained in the NPRM. Comments on the proposed rulemaking were due on or before July 31, 2017. EPA received no adverse comment on the proposed action.

### III. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of Jefferson County Regulation 1.06—*Stationary Source Self-Monitoring, Emissions Inventory Development, and Reporting*, District effective on January 19, 2011, with the exception of Section 5 and any references to Section 5 located in Section 3. EPA has made, and will continue to make, these materials generally available through [www.regulations.gov](http://www.regulations.gov) and/or at the EPA Region 4 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully federally-enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA’s approval, and will be incorporated by reference by the Director of the Federal Register in the next update to the SIP compilation.<sup>4</sup>

### IV. Final Action

EPA is taking final action to approve Kentucky’s March 22, 2011, and April 20, 2011, SIP revisions as discussed in Section II, above. The text of Jefferson County Regulation 1.06—*Stationary Source Self-Monitoring, Emissions Inventory Development, and Reporting* in the SIP will reflect the version of the rule effective on January 19, 2011 (Version 9) with the exception of changes to Section 5 and any references to Section 5 located in Section 3.

### V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA’s role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond

those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104–4);

- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other

<sup>3</sup> The criteria pollutants are particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, and ground-level ozone.

<sup>4</sup> 62 FR 27968 (May 22, 1997).

required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by October 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition

for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Sulfur dioxide, Particulate matter, Reporting and recordkeeping requirements.

Dated: August 16, 2017.

V. Anne Heard,

Acting Regional Administrator, Region 4.

40 CFR part 52 is amended as follows:

**PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42.U.S.C. 7401 *et seq.*

**Subpart S—Kentucky**

■ 2. In § 52.920, table 2 in paragraph (c) is amended by revising the entry “1.06” to read as follows:

**§ 52.920 Identification of plan.**

\* \* \* \* \*

(c) \* \* \*

TABLE 2—EPA-APPROVED JEFFERSON COUNTY REGULATIONS FOR KENTUCKY

Reg	Title/subject	EPA approval date	Federal Register notice	District effective date	Explanation
<b>Reg 1—General Provisions</b>					
1.06	Stationary Source Self-Monitoring, Emissions Inventory Development, and Reporting.	8/28/17	[insert Federal Register citation].	1/19/2011	Revision approved except section 5 and any references to section 5 located in section 3.

\* \* \* \* \*  
[FR Doc. 2017–18087 Filed 8–25–17; 8:45 am]  
BILLING CODE 6560–50–P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

[EPA–R03–OAR–2016–0052; FRL–9966–78–Region 3]

**Approval and Promulgation of Air Quality Implementation Plans; Virginia; Major New Source Review**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is approving revisions to the Commonwealth of Virginia state implementation plan (SIP). The revisions amend Virginia’s major source New Source Review (NSR) regulations to make them consistent with the federal program. EPA is approving these revisions to the Virginia SIP in accordance with the requirements of the Clean Air Act (CAA).

**DATES:** This final rule is effective on September 27, 2017.

**ADDRESSES:** EPA has established a docket for this action under Docket ID Number EPA–R03–OAR–2016–0052. All documents in the docket are listed on the <https://www.regulations.gov> Web site. Although listed in the index, some information is not publicly available, *e.g.*, confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov> or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

**FOR FURTHER INFORMATION CONTACT:** David Talley, (215) 814–2117, or by email at [talley.david@epa.gov](mailto:talley.david@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Background**

On April 18, 2017 (73 FR 18272), EPA published a notice of proposed rulemaking (NPR) for the Commonwealth of Virginia. In the NPR, EPA proposed approval of revisions to Virginia’s NSR regulations. On October

16, 2015, the Commonwealth of Virginia through the Virginia Department of Environmental Quality (VADEQ), submitted a formal revision to the Virginia SIP. The SIP revision consists of amendments to the preconstruction permit requirements under VADEQ’s major NSR permit program. The revision affects sources subject to VADEQ’s Prevention of Significant Deterioration (PSD) program, which applies in areas which are in attainment with (or unclassifiable for) the national ambient air quality standards (NAAQS), as well as affecting sources subject to its nonattainment NSR permit program, applicable in areas not in attainment with the NAAQS. By letter dated March 1, 2017, VADEQ officially withdrew a small and specific portion of the October 16, 2015 submittal from consideration for approval into the Virginia SIP. A copy of the letter has been included in the docket for this action. Further discussion of the withdrawal is provided in section II.A of this notice.

**II. Summary of SIP Revision and EPA Analysis**

As discussed in the NPR, the October 16, 2015 SIP submittal revision (as

amended March 1, 2017) (hereinafter referred to as the 2015 NSR SIP Revision) generally makes the Virginia Administrative Code regulations at 9VAC5 consistent with the federal NSR program at 40 CFR 51.165 and 51.166. The specific changes to 9VAC5: (1) Allow the use of a 10-year lookback period to calculate pre-change emissions for sources other than electric utility steam generating units (EGUs); (2) allow the use of different lookback periods for different regulated NSR pollutants; (3) extend the effective period for plantwide applicability limits (PALs) to 10 years; and, (4) allow replacement units to be treated as existing units, and thus provide the ability to use baseline actual and projected actual emissions when determining applicability. Additionally, there are a number of minor changes which are strictly administrative in nature, consisting of small grammatical revisions, or re-numbering. EPA is approving VADEQ's 2015 NSR SIP Revision as a revision to the Virginia SIP because it meets the Federal requirements of 40 CFR 51.165 and 51.166, and CAA sections 110(a) and 173. Additionally, the revisions are in accordance with section 110(l) of the CAA because they will not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable CAA requirement.

#### A. Baseline Actual Emissions

NSR applicability is determined by comparing the pre-change emissions of the source(s) affected by the project at hand to the post-change emissions, and determining whether the net increase is "significant." For new units, pre-change (baseline) emissions are zero. For modified units, sources must calculate baseline actual emissions (BAE). For sources other than EGUs, the Federal PSD and nonattainment NSR regulations provide for the calculation of BAE using ". . . the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the reviewing authority. . ." See 40 CFR 51.165(a)(1)(xxxv)(B) and 51.166(b)(47)(ii). VADEQ's previously approved BAE definitions, codified at 9VAC5-80 sections 1615C (PSD) and 2010C (nonattainment NSR), provided for a 5-year lookback period. The 2015 NSR SIP Revision included VADEQ's

revised definitions of BAE to provide for a 10-year lookback period for non EGUs, consistent with the Federal counterpart.

When EPA originally approved the 5-year lookback into VADEQ's nonattainment NSR and PSD programs, limited approval was granted. See 73 FR 62893, 62897 (October 22, 2008). The previous definitions of BAE at 9VAC5-80 sections 1615C and 2010C in VADEQ's June 27, 2008 SIP submittals included the 5-year lookback which EPA found approvable, despite being different from the Federal lookback period. However, VADEQ's regulations at the time in sections 1615C and 2010C also included provisions for the use of a different time period to calculate BAE if it was found to be more representative of normal operations. In our October 22, 2008 final rulemaking notice, EPA raised concerns that this provision could allow for the use of a lookback period that extended beyond the ten years allowed by the Federal programs for PSD and NSR. However, EPA noted that because VADEQ had affirmed that it was not its intention to extend the lookback period beyond ten years, a limited approval was granted. See 73 FR at 62898. In VADEQ's 2015 NSR SIP Revision submittal, the provision allowing for the use of a different lookback period if it was found to be more representative of normal operations was struck from the definition of BAE at 9VAC5-80 section 1615C, making it consistent with the federal counterpart. However, that provision was inadvertently left in the definition of BAE in the version of 9VAC5-80 section 2010C for NSR. By letter dated March 1, 2017, VADEQ officially withdrew from EPA's consideration for inclusion into the SIP the portion of the definition of BAE at section 2010C stating, "The board will allow the use of another time period upon a determination that it is more representative of normal source operation." Thus, EPA finds the revised definition of BAE at 9VAC5-80 section 2010C (with the provision for a different lookback period stricken) fully approvable as the definition is consistent with Federal CAA requirements permitting up to a 10-year lookback. EPA expects that the sentence withdrawn from the SIP submittal will be removed from the Virginia Code as soon as practicable as Virginia affirmed in its March 1, 2017 letter, and that VADEQ will implement its NSR program consistent with the approved SIP and the Federal requirements for NSR in the interim. With this approval, EPA also removes its prior limited approval for these regulations.

Finally, the Federal requirement for calculating BAE for PSD and NSR provide for the use of different 24-month periods for different regulated NSR pollutants. See 40 CFR 51.165(a)(1)(xxxv)(B)(4) and 51.166(b)(47)(ii)(c). VADEQ has revised the BAE definitions at 9VAC5-80 sections 1615C and 2010C, and 9VAC5-85 section 50 to be consistent with the federal requirements relating to different lookback periods for different regulated NSR pollutants. Because these revisions are consistent with federal definitions in 40 CFR 51.165 and 51.166 for using different 24-month periods for different regulated NSR pollutants, EPA finds these revisions approvable in accordance with CAA requirements.

#### B. Plantwide Applicability Limits (PALs)

Federal requirements for PALs include an effective period of ten years for the plantwide permit.<sup>1</sup> See 40 CFR sections 51.165(f) *et seq* and 51.166(w) *et seq*. The 2015 NSR SIP Revision included amended versions of 9VAC-5-80 sections 1615C, 1865C(1)(f), 2010C, and 2144C(1)(f), as well as 9VAC5-85-50, to provide for a PAL effective period of ten years, consistent with the Federal regulations providing for a ten-year PAL effective period. In addition, the 2015 NSR SIP Revision included amended versions of 9VAC5-80 sections 1865E and 2144E and 9VAC5-85-55 to allow for the use of different 24-month periods for different regulated NSR pollutants when establishing PALs, consistent with the discussion in Section II.A of this notice. EPA finds these amended provisions approvable for the Virginia SIP because these amended regulations for PAL effective period and baseline calculations are consistent with Federal requirements for PALs in 40 CFR 51.165 and 51.166.

#### C. Replacement Units

Finally, the 2015 NSR SIP Revision submittal added definitions of "replacement unit," and amends the definitions of "emissions unit," under 9VAC5-80 sections 1615C and 2010C and 9VAC5-85 section 50. The effect of

<sup>1</sup> A PAL is a voluntary permit option that provides the ability to manage facility-wide emissions without triggering major NSR review. The flexibility provided under a PAL facilitates the ability to respond rapidly to changing market conditions while enhancing the environmental protection afforded under the program. If facility emissions remain below a plantwide actual emissions cap (that is, an actuals PAL), then a facility can avoid major NSR permitting process when making alterations to the facility or individual emissions units that would otherwise trigger NSR permitting. In return for this flexibility, facilities must monitor emissions from all emissions units under the PAL in addition to other recordkeeping and reporting requirements.

these revisions is to allow replacement units to be treated as existing units when calculating pre- and post-change emissions for purposes of determining NSR applicability. VADEQ's definitions of "replacement unit" are consistent with their Federal counterparts at 40 CFR 51.165(a)(1)(xxi) and 51.166(b)(32). VADEQ's amended definitions of "emissions unit" are consistent with their Federal counterparts at 40 CFR 51.165(a)(1)(vii) and 51.166(b)(7), as is VADEQ's approach to calculating pre- and post-change emissions for replacement units. Thus, EPA finds these new and amended provisions in the 2015 NSR SIP Revision approvable.

EPA finds the revisions to 9VAC5-80 sections 1615, 1865, 2010, and 2144 and 9 VAC5-85 sections 50 and 55 (including the changes discussed herein as well as the minor administrative changes for grammatical and numbering consistency) consistent with CAA section 110(l). None of the revisions interfere with any applicable requirement concerning attainment of any NAAQS nor interfere with reasonable further progress or any other applicable requirement of the CAA. As described in this rulemaking, the revisions to the Virginia Code in the 2015 NSR SIP Revision are consistent with federal requirements for PSD and NSR in 40 CFR 51.165 and 51.166. Because the revisions are consistent with federal requirements for PSD and NSR permitting programs which permit construction and modifications in accordance with permitting and emission limitation requirements and address definitions for BAE and PAL effective periods, EPA does not expect any interference with the NAAQS from these revisions.

Other specific requirements of the 2015 NSR SIP Revision and the rationale for EPA's proposed action are explained in the NPR and will not be restated here.

### III. EPA's Response to Comments Received on the Proposed Action

EPA received two sets of comments on the April 18, 2017 NPR. A full set of these comments is included in the docket for this final action. A summary of the comments and EPA's responses are included herein.

*Comment:* The first commenter asserts that EPA ". . . shouldn't have the right to tell States what they can and cannot do," and further, that the States are capable of ". . . cleaning up the air."

*EPA Response:* The CAA establishes a partnership between state and Federal entities for the protection and improvement of the nation's air quality. Under CAA section 109, EPA is required

to establish NAAQS for the protection of public health and welfare. Subsequent to the promulgation (or revision) of a NAAQS, states are required by CAA section 110 to adopt and submit to EPA for approval, a SIP which provides for the implementation, maintenance, and enforcement of the NAAQS. Virginia's October 16, 2015 SIP submittal met that requirement. In addition, section 110(a)(2)(C) specifically requires that state plans include a PSD and nonattainment NSR permit program as required in parts C and D of Title I of the Clean Air Act. The division of responsibilities between EPA and the states in the section 110 process was reaffirmed by the U.S. Court of Appeals for the District of Columbia Circuit in the *Commonwealth of Virginia, et al., v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997). The action being finalized today approving revisions to Virginia regulations which implement the PSD and NSR permit program required by the CAA is consistent with EPA's responsibilities as established by Congress under CAA section 110. EPA is approving the 2015 NSR SIP Revision because it complies with the provisions of the CAA and applicable federal regulations as discussed in the NPR and in this rulemaking action. See section 110(k) of the CAA.

*Comment:* The second commenter expressed a need for clean air, and urged EPA to "(s)top trying to lower . . ." environmental standards.

*EPA Response:* EPA thanks the commenter for the concern for environmental issues such as clean air and water. However, the comment is not germane or relevant to the issues in this rulemaking to bring Virginia's NSR program in line with federal NSR requirements in 40 CFR 51.165 and 51.166. EPA has fully explained our reasons for approving VA's revisions to its NSR program in this notice and in the NPR. As discussed in the NPR, none of the revisions interfere with any applicable requirement concerning attainment of any NAAQS nor interfere with reasonable further progress or any other applicable requirement of the CAA. In addition, the comment lacks the required specificity and does not address any specific Virginia regulation upon which we should act differently nor address any action EPA should take differently with regards to Virginia's NSR regulations.

### IV. Final Action

EPA is approving the 2015 NSR SIP Revision as it is in accordance with requirements in the CAA in sections 110 and 173 and with federal regulations at 40 CFR 51.165 and 51.166.

Additionally, because the Virginia regulations submitted in the 2015 NSR SIP Revision correct issues related to appropriate BAE and "lookback period" in Virginia's NSR permit program for which EPA previously granted limited approval in 2008, EPA now grants full approval to Virginia's NSR permit program for PSD and NSR permitting.

### V. General Information Pertaining to SIP Submittals From the Commonwealth of Virginia

In 1995, Virginia adopted legislation that provides, subject to certain conditions, for an environmental assessment (audit) "privilege" for voluntary compliance evaluations performed by a regulated entity. The legislation further addresses the relative burden of proof for parties either asserting the privilege or seeking disclosure of documents for which the privilege is claimed. Virginia's legislation also provides, subject to certain conditions, for a penalty waiver for violations of environmental laws when a regulated entity discovers such violations pursuant to a voluntary compliance evaluation and voluntarily discloses such violations to the Commonwealth and takes prompt and appropriate measures to remedy the violations. Virginia's Voluntary Environmental Assessment Privilege Law, Va. Code Sec. 10.1-1198, provides a privilege that protects from disclosure documents and information about the content of those documents that are the product of a voluntary environmental assessment. The Privilege Law does not extend to documents or information that: (1) Are generated or developed before the commencement of a voluntary environmental assessment; (2) are prepared independently of the assessment process; (3) demonstrate a clear, imminent and substantial danger to the public health or environment; or (4) are required by law.

On January 12, 1998, the Commonwealth of Virginia Office of the Attorney General provided a legal opinion that states that the Privilege law, Va. Code Sec. 10.1-1198, precludes granting a privilege to documents and information "required by law," including documents and information "required by federal law to maintain program delegation, authorization or approval," since Virginia must "enforce federally authorized environmental programs in a manner that is no less stringent than their federal counterparts . . ." The opinion concludes that "[r]egarding § 10.1-1198, therefore, documents or other information needed for civil or criminal enforcement under one of these programs could not be

privileged because such documents and information are essential to pursuing enforcement in a manner required by federal law to maintain program delegation, authorization or approval.”

Virginia’s Immunity law, Va. Code Sec. 10.1–1199, provides that “[t]o the extent consistent with requirements imposed by federal law,” any person making a voluntary disclosure of information to a state agency regarding a violation of an environmental statute, regulation, permit, or administrative order is granted immunity from administrative or civil penalty. The Attorney General’s January 12, 1998 opinion states that the quoted language renders this statute inapplicable to enforcement of any federally authorized programs, since “no immunity could be afforded from administrative, civil, or criminal penalties because granting such immunity would not be consistent with federal law, which is one of the criteria for immunity.”

Therefore, EPA has determined that Virginia’s Privilege and Immunity statutes will not preclude the Commonwealth from enforcing its NSR program consistent with the federal requirements. In any event, because EPA has also determined that a state audit privilege and immunity law can affect only state enforcement and cannot have any impact on federal enforcement authorities, EPA may at any time invoke its authority under the CAA, including, for example, sections 113, 167, 205, 211 or 213, to enforce the requirements or prohibitions of the state plan, independently of any state enforcement effort. In addition, citizen enforcement under section 304 of the CAA is likewise unaffected by this, or any, state audit privilege or immunity law.

## VI. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the VADEQ regulations regarding definitions and permitting requirements discussed in Section II of this notice. EPA has made, and will continue to make, these materials generally available through <http://www.regulations.gov> and/or at the EPA Region III Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of

the effective date of the final rulemaking of EPA’s approval, and will be incorporated by reference by the Director of the Federal Register in the next update to the SIP compilation.<sup>2</sup>

## VII. Statutory and Executive Order Reviews

### A. General Requirements

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA’s role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

<sup>2</sup> 62 FR 27968 (May 22, 1997).

The SIP is not approved to apply on any Indian reservation land as defined in 18 U.S.C. 1151 or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

### B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action 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 publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

### C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by October 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action.

This action pertaining to Virginia’s preconstruction permitting requirements may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: August 12, 2017.

Authority: 42 U.S.C. 7401 *et seq.*

§ 52.2420 Identification of plan.

Cecil Rodrigues,

Acting Regional Administrator, Region III.

**Subpart VV—Virginia**

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(c) \* \* \*

40 CFR part 52 is amended as follows:

**PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

■ 1. The authority citation for part 52 continues to read as follows:

■ 2. In § 52.2420, the table in paragraph (c) is amended by revising the entries for Sections “5–50–270”, “5–50–280”, “5–80–1605” through “5–80–2240”, “5–85–50”, and “5–85–55” to read as follows:

**EPA-APPROVED VIRGINIA REGULATIONS AND STATUTES**

State citation	Title/subject	State effective date	EPA approval date	Explanation [former SIP citation]
* * *				
<b>9 VAC 5, Chapter 50 New and Modified Stationary Sources [Part V]</b>				
* * *				
<b>Article 4 Standards of Performance for Stationary Sources (Rule 5–4)</b>				
* * *				
5–50–270	Standard for Major Stationary Sources (Nonattainment Areas).	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–50–280	Standard for Stationary Sources (Prevention of Significant Deterioration Areas).	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
* * *				
<b>9 VAC 5, Chapter 80 Permits for Stationary Sources [Part VIII]</b>				
* * *				
<b>Article 8 Permits—Major Stationary Sources and Major Modifications Located in Prevention of Significant Deterioration Areas</b>				
5–80–1605	Applicability	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1615	Definitions	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1625	General	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1635	Ambient Air Increments	8/17/11	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1645	Ambient Air Ceilings	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1655	Applications	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1665	Compliance with local zoning requirements.	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1675	Compliance determination and verification by performance testing.	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1685	Stack Heights	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1695	Exemptions	6/4/14	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1705	Control technology review	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1715	Source impact analysis	6/4/14	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1725	Air quality models	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1735	Air quality analysis	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.

EPA-APPROVED VIRGINIA REGULATIONS AND STATUTES—Continued

State citation	Title/subject	State effective date	EPA approval date	Explanation [former SIP citation]
5–80–1745	Source Information	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1755	Additional impact analysis	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1765	Sources affecting Federal class I areas—additional requirements.	8/17/11	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1775	Public participation	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1785	Source obligation	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1795	Environmental impact statements.	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1805	Disputed permits	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1815	Interstate pollution abatement	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1825	Innovative control technology	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1865	Actuals plantwide applicability (PAL).	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	
5–80–1915	Actions to combine permit terms and conditions.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1925	Actions to change permits	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1935	Administrative permit amendments.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1945	Minor permit amendments	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1955	Significant amendment procedures.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1965	Reopening for cause	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1975	Transfer of permits	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1985	Permit invalidation, revocation, and enforcement.	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–1995	Existence of permit no defense.	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.

**Article 9 Permits Major Stationary Sources and Major Modifications Located in Nonattainment Areas or the Ozone Transport Region**

5–80–2000	Applicability	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2010	Definitions	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	Paragraph C is revised, except that under subdivision b of the definition of “baseline actual emissions,” the sentence stating, “The board shall allow the use of another time period upon a determination that it is more representative of normal source operation,” is not in the SIP.
5–80–2020	General	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2030	Applications	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2040	Application information required.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2050	Standards and conditions for granting permits.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2060	Action on permit application	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2070	Public participation	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2080	Compliance determination and verification by performance testing.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.

EPA-APPROVED VIRGINIA REGULATIONS AND STATUTES—Continued

State citation	Title/subject	State effective date	EPA approval date	Explanation [former SIP citation]
5–80–2090	Application review and analysis.	5/1/02 9/01/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2091	Source obligation	9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2110	Interstate Pollution Abatement	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2120	Offsets	8/17/11	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2130	De minimis increases and stationary source modification alternatives for ozone nonattainment areas classified as serious or severe in 9 VAC 5–20–204.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2140	Exemptions	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2144	Actuals plantwide applicability limits (PALs).	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	
5–80–2150	Compliance with local zoning requirements.	5/1/02 9/01/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2170	Transfer of permits	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2180	Permit invalidation, revocation, and enforcement.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2190	Existence of permit no defense.	5/1/02 9/1/06	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2195	Acts to combine permit terms and conditions.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2200	Actions to change permits	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2210	Administrative permit amendments.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2220	Minor permit amendments	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2230	Significant amendment procedures.	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.
5–80–2240	Reopening for cause	7/23/09	8/28/17, [Insert <b>Federal Register</b> citation].	Previous approval 10/22/08.

9 VAC 5, Chapter 85 Permits for Stationary Sources of Pollutants Subject to Regulation

\* \* \* \* \*

Part III Prevention of Significant Deterioration Permit Actions

5–85–50	Definitions	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	
5–85–55	Actuals Plantwide applicability limits (PALs).	8/13/15	8/28/17, [Insert <b>Federal Register</b> citation].	

\* \* \* \* \*

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 52**

[EPA-R03-OAR-2016-0576; FRL-9966-79-Region 3]

**Approval and Promulgation of Air Quality Implementation Plans; Maryland; Permits, Approvals, and Registrations****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is approving a state implementation plan (SIP) revision submitted by the State of Maryland. This revision pertains to Maryland's administrative procedures for the issuance, denial, and appeal of permits issued by the Maryland Department of the Environment (MDE). This action is being taken under the Clean Air Act (CAA).

**DATES:** This final rule is effective on September 27, 2017.

**ADDRESSES:** EPA has established a docket for this action under Docket ID Number EPA-R03-OAR-2016-0576. All documents in the docket are listed on the <http://www.regulations.gov> Web site. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <http://www.regulations.gov>, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

**FOR FURTHER INFORMATION CONTACT:** David Talley, (215) 814-2117, or by email at [talley.david@epa.gov](mailto:talley.david@epa.gov).

**SUPPLEMENTARY INFORMATION:****I. Background**

On June 23, 2017 (82 FR 28614), EPA published a notice of proposed rulemaking (NPR) for the State of Maryland. In the NPR, EPA proposed approval of amendments to the Code of Maryland Administrative Regulations (COMAR) as a revision to the Maryland SIP. The formal SIP revision (#16-01) was submitted by Maryland on February 22, 2016.

**II. Summary of SIP Revision and EPA Analysis**

Maryland's SIP revision submittal includes several amended administrative provisions under COMAR 26.11.02 (Permits, Approvals, and Registration) for inclusion in the Maryland SIP. Specifically, 26.11.02.07 (Procedures for Denying, Revoking, or Reopening and Revising a Permit or Approval), 26.11.02.11 (Procedures for Obtaining Permits to Construct Certain Significant Sources), and 26.11.02.12 (Procedures for Obtaining Approvals of PSD Sources and NSR Sources, Certain Permits to Construct, and Case-by-Case MACT Determinations in Accordance with 40 CFR part 63, subpart B) have been revised. Maryland has requested EPA add the amended provisions to the Maryland SIP.

The amended COMAR provisions with State effective dates of December 10, 2015 address MDE's administrative processes for permit issuance and denial. Specifically, the amended COMAR provisions eliminate the "contested case" process and the Office of Administrative Hearings' adjudicatory hearing process for major permits, and substitute direct judicial review. Additionally, the revisions expand standing for challenges to those major permits, and include additional public notice requirements for certain sources. The amended COMAR provisions are described in more detail in the NPR and will not be repeated here.

MDE's February 22, 2016 SIP submittal is consistent with all applicable requirements of the CAA and its implementing regulations. The COMAR public notice requirements meet or exceed the requirements of 40 CFR 51.160 and 51.161. Additionally, the revisions are approvable under section 110 of the CAA (specifically section 110(a)(2)(A) and (C) and section 173 for NSR programs). Under section 110(a)(2)(C), the SIP must include a program to enforce the emission limits and control measures in a state's SIP (as required by section 110(a)(2)(A)) and must also contain a program to regulate modification/construction of sources so that the NAAQS are achieved. Section 173 requires the permits program for nonattainment NSR and requires states to have a SIP with a permit program that ensures sources are required to comply with certain things like stringent emission limitations (*i.e.*, lowest achievable emission rates) and offsets. While having a permits program in the SIP that addresses denial or revocation of permits and addresses permit appeals does not address the required substance

of a NSR program, these provisions do make the NSR program enforceable, and therefore EPA finds the SIP submission and revisions to COMAR 26.11.02 approvable under CAA sections 173 and 110(a)(2)(A) and (C). EPA finds the revisions approvable under section 110 and 173 of the CAA and the CAA's implementing regulations. In addition, because none of the revisions to COMAR 26.11.02 will affect emissions of pollutants from sources and are largely administrative in nature, EPA finds that none of the revisions to COMAR 26.11.02 will interfere with reasonable further progress, any NAAQS, or any other applicable requirements in the CAA. Thus, EPA finds the submittal is approvable for section 110(l) of the CAA.

Other specific requirements of MDE's February 22, 2016 SIP submittal and the rationale for EPA's approval of the submittal are explained in the NPR and will not be restated here. No public comments were received on the NPR.

**III. Final Action**

EPA is approving MDE's February 22, 2016 SIP submittal as a revision to the Maryland SIP. Specifically, EPA is approving revised COMAR 26.11.02.07, 26.11.02.11 and 26.11.02.12 for inclusion in the Maryland SIP in accordance with sections 110 and 173 of the CAA.

**IV. Incorporation by Reference**

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the MDE rules regarding permit issuance and denial as described in Section II of this preamble. EPA has made, and will continue to make, these materials generally available through <http://www.regulations.gov> and/or at the EPA Region III Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA's approval, and will be incorporated by reference by the Director of the Federal Register in the next update to the SIP compilation.<sup>1</sup>

<sup>1</sup> 62 FR 27968 (May 22, 1997).

**V. Statutory and Executive Order Reviews**

**A. General Requirements**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

**B. Submission to Congress and the Comptroller General**

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action 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 publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

**C. Petitions for Judicial Review**

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States

Court of Appeals for the appropriate circuit by October 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action.

This action pertaining to MDE's rules regarding permit issuance and denial may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2)).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: August 12, 2017.

**Cecil Rodrigues**,  
Acting Regional Administrator, Region III.

40 CFR part 52 is amended as follows:

**PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

■ 1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

**Subpart V—Maryland**

■ 2. In § 52.1070, the table in paragraph (c) is amended by revising the entries "26.11.02.07," "26.11.02.11," and "26.11.02.12" to read as follows:

**§ 52.1070 Identification of plan.**

\* \* \* \* \*  
(c) \* \* \*

**EPA-APPROVED REGULATIONS, TECHNICAL MEMORANDA, AND STATUTES IN THE MARYLAND SIP**

Code of Maryland Administrative Regulations (COMAR) citation	Title/subject	State effective date	EPA approval date	Additional explanation/citation at 40 CFR 52.1100
*	*	*	*	*
<b>26.11.02 Permits, Approvals, and Registration</b>				
*	*	*	*	*
26.11.02.07 .....	Procedures for Denying, Revoking, or Reopening and Revising a Permit or Approval.	12/10/15	8/28/17, [insert <b>Federal Register</b> citation].	Previous Approval 2/27/2003, 68 FR 9012, (c) (182)

EPA-APPROVED REGULATIONS, TECHNICAL MEMORANDA, AND STATUTES IN THE MARYLAND SIP—Continued

Code of Maryland Administrative Regulations (COMAR) citation	Title/subject	State effective date	EPA approval date	Additional explanation/citation at 40 CFR 52.1100
26.11.02.11	Procedures for Obtaining Permits to Construct Certain Significant Sources.	12/10/15	8/28/17, [insert <b>Federal Register</b> citation].	Previous Approval 2/27/2003, 68 FR 9012, (c) (182)
26.11.02.12	Procedures for Obtaining Approvals of PSD Sources and NSR Sources, Certain Permits to Construct, and Case-by-Case MACT Determinations in Accordance with 40 CFR part 63, Subpart B.	12/10/15	8/28/17, [insert <b>Federal Register</b> citation].	Previous Approval 8/2/2012, 77 FR 45949

\* \* \* \* \*

[FR Doc. 2017-17865 Filed 8-25-17; 8:45 am]  
 BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

[EPA-R10-OAR-2017-0184; FRL-9966-80-Region 10]

**Approval and Promulgation of Implementation Plans; AK: Adoption Updates and Rule Revisions**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is approving state implementation plan (SIP) revisions submitted by the State of Alaska Department of Environmental Conservation (ADEC) on September 15, 2016. These revisions primarily update adoptions of Federal regulations in the Alaska SIP. The revisions also strengthen the State of Alaska’s (Alaska or State) minor source permitting requirements and remove obsolete source-category specific regulations. In addition, EPA is approving SIP revisions to Alaska’s general and transportation conformity regulations submitted by ADEC on March 10, 2016. The EPA is taking action only on the conformity related portions of the March 2016 submittal. The other portions of the submittal are or will be addressed in separate actions.

**DATES:** This final rule is effective September 27, 2017.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-R10-OAR-2017-0184. All

documents in the docket are listed on the <https://www.regulations.gov> Web site. Although listed in the index, some information may not be publicly available, *i.e.*, Confidential Business Information or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and is publicly available only in hard copy form. Publicly available docket materials are available at <http://www.regulations.gov> or at EPA Region 10, Office of Air and Waste, 1200 Sixth Avenue, Seattle, Washington 98101. EPA requests that you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section below, to schedule your inspection. The Regional Office’s official hours of business are Monday through Friday, 8:30 to 4:30, excluding federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Randall Ruddick, Air Planning Unit, Office of Air and Waste (OAW-150), Environmental Protection Agency, Region 10, 1200 Sixth Ave, Suite 900, Seattle, WA 98101; phone: (206) 553-1999; email: [ruddick.randall@epa.gov](mailto:ruddick.randall@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever “we,” “us,” or “our” is used, it is intended to refer to the EPA.

**Table of Contents**

- I. Background
- II. Final Action
- III. Incorporation by Reference
- IV. Statutory and Executive Orders Review

**I. Background**

On March 10, 2016 and September 15, 2016, Alaska submitted SIP revisions to EPA for approval. On June 13, 2017, the EPA proposed to approve the conformity portions of Alaska’s March 10, 2016 submittal and all of the

revisions requested in the September 15, 2016 submittal (82 FR 27031). Please see our proposed rulemaking for further explanation and the basis for our finding. The public comment period for this proposal ended on July 13, 2017. We received two supportive comments.

**II. Final Action**

EPA is approving, and incorporating by reference where appropriate in Alaska’s SIP, all revisions requested by Alaska on September 15, 2016 (state effective August 20, 2016) to the following provisions:

- 18 AAC 50.010(4) (Ambient Air Quality Standards)
- 18 AAC 50.020(a) (Baseline Dates and Maximum Allowable Increases)
- 18 AAC 50.035(a)(3) and (a)(7) (Documents, Procedures, and Methods Adopted by Reference)
- 18 AAC 50.040(f) and (h) (Federal Standards Adopted by Reference)
- 18 AAC 50.215(a)(3) (Ambient Air Quality Analysis Methods)
- 18 AAC 50.345(o) (Construction, Minor and Operating Permits: Standard Permit Conditions)
- 18 AAC 50.502(c), (e), (f), (f)(1)(C), (f)(5), (g), (h)(3)(A), and (h)(3)(B) (Minor Permits for Air Quality Protection)
- 18 AAC 50.540 (c)(2)(A) (Minor Permit: Application)
- 18 AAC 50.542(b)(5) and (d)(1) (Minor Permit: Review and Issuance)

At Alaska’s request, EPA is also removing from the SIP the following provisions that ADEC repealed as a matter of state law: 18 AAC 50.055(a)(2), (a)(3), (a)(7), (a)(8), (b)(4), (b)(6), (f) (Industrial Process and Fuel-Burning Equipment) and 18 AAC 50.060 (Pulp Mills).

Finally, EPA is approving revisions to 18 AAC 50, Article 7, Transportation

Conformity, submitted by Alaska on March 10, 2016; specifically, the revisions to transportation conformity provisions in 18 AAC 50.715 and 50.720, and the removal of the general conformity provisions in 50.735.

We have determined that the submitted SIP revisions are consistent with section 110 and part C of Title I of the CAA.

### III. Incorporation by Reference

In this rule, EPA is approving regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, we are incorporating by reference the provisions described above in Section II. Final Action and set forth below, as amendments to 40 CFR part 52. EPA has made, and will continue to make, these documents generally available electronically through <http://www.regulations.gov> and/or at the EPA Region 10 office (please contact the person identified in the **FOR FURTHER INFORMATION, CONTACT** section of this preamble for more information).

### IV. Statutory and Executive Orders Review

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);

- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because this action does not involve technical standards; and

- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action 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 publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under CAA section 307(b)(1), petitions for judicial review of this

action must be filed in the United States Court of Appeals for the appropriate circuit by October 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (*See* CAA section 307(b)(2)).

### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Administrative practice and procedure, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: August 10, 2017.

**Michelle L. Pirzadeh,**

*Acting Regional Administrator, Region 10.*

For the reasons set forth in the preamble, 40 CFR part 52 is amended as follows:

### PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

#### Subpart C—Alaska

■ 2. In § 52.70, the table in paragraph (c) is amended by:

- a. Revising entries 18 AAC 50.010, 18 AAC 50.020, 18 AAC 50.035, 18 AAC 50.040, 18 AAC 50.055;
- b. Removing entry 18 AAC 50.060;
- c. Revising entries 18 AAC 50.215, 18 AAC 50.345, 18 AAC 50.502, 18 AAC 50.540, 18 AAC 50.542, 18 AAC 50.715, and 18 AAC 50.720; and
- d. Removing entry 18 AAC 50.735.

The revisions read as follows:

#### § 52.70 Identification of plan.

\* \* \* \* \*

(c) \* \* \*

EPA-APPROVED ALASKA REGULATIONS AND STATUTES

State citation	Title/subject	State effective date	EPA approval date	Explanations
<b>Alaska Administrative Code Title 18 Environmental Conservation, Chapter 50 Air Quality</b>				
<b>Control (18 AAC 50)</b>				
<b>18 AAC 50 Article 1. Ambient Air Quality Management</b>				
* 18 AAC 50.010 .....	* Ambient Air Quality Standards .....	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (8).
* 18 AAC 50.020 .....	* Baseline Dates and Maximum Allowable Increases.	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation].
* 18 AAC 50.035 .....	* Documents, Procedures and Methods Adopted by Reference.	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (a)(6) and (b)(4).
* 18 AAC 50.040 .....	* Federal Standards Adopted by Reference.	* 8/20/16; 11/9/14	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (a), (b), (c), (d), (e), (g), (j), and (k).
* 18 AAC 50.055 .....	* Industrial Processes and Fuel-Burning Equipment.	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (d)(2)(B).
<b>18 AAC 50 Article 2. Program Administration</b>				
* 18 AAC 50.215 .....	* Ambient Air Quality Analysis Methods ..	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (a)(4).
<b>18 AAC 50 Article 3. Major Stationary Source Permits</b>				
* 18 AAC 50.345 .....	* Construction, Minor and Operating Permits: Standard Permit Conditions.	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (b), (c)(3), and (l).
<b>18 AAC 50 Article 5. Minor Permits</b>				
* 18 AAC 50.502 .....	* Minor Permits for Air Quality Protection	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation].
* 18 AAC 50.540 .....	* Minor Permit: Application .....	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation].
* 18 AAC 50.542 .....	* Minor Permit: Review and Issuance .....	* 8/20/16	* 8/28/17	* [Insert <b>Federal Register</b> citation]. Except (b)(2).
<b>18 AAC 50 Article 7. Transportation Conformity</b>				
* 18 AAC 50.715 .....	* Interagency Consultation Procedures ....	* 3/2/16	* 8/28/17	* [Insert <b>Federal Register</b> citation].
* 18 AAC 50.720 .....	* Public Involvement .....	* 3/2/16	* 8/28/17	* [Insert <b>Federal Register</b> citation] .....

\* \* \* \* \*

[FR Doc. 2017-17861 Filed 8-25-17; 8:45 am]

BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 52**

[EPA-R03-OAR-2017-0394; FRL-9966-96-Region 3]

**Approval and Promulgation of Air Quality Implementation Plans; Maryland; Approval of an Alternative Volatile Organic Compound Emission Standard****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Direct final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is taking direct final action to approve a revision to the State of Maryland's state implementation plan (SIP). Maryland requested EPA incorporate by reference into the Maryland SIP a Maryland Department of the Environment (MDE) order that establishes an alternative volatile organic compound (VOC) emission standard for National Gypsum Company (NGC) that will ensure that this source remains a minor stationary source of VOCs. EPA is approving the SIP submittal incorporating by reference MDE's order for NGC in accordance with the requirements of the Clean Air Act (CAA).

**DATES:** This rule is effective on November 27, 2017 without further notice, unless EPA receives adverse written comment by September 27, 2017. If EPA receives such comments, it will publish a timely withdrawal of the direct final rule in the **Federal Register** and inform the public that the rule will not take effect.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R03-OAR-2017-0394 at <https://www.regulations.gov>, or via email to [stahl.cynthia@epa.gov](mailto:stahl.cynthia@epa.gov). For comments submitted at [Regulations.gov](https://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](https://www.regulations.gov). For either manner of submission, 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, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:**Gregory A. Becoat, (215) 814-2036, or by email at [becoat.gregory@epa.gov](mailto:becoat.gregory@epa.gov).**SUPPLEMENTARY INFORMATION:****I. Background**

On June 24, 2016, MDE submitted a formal revision to the Maryland SIP. The SIP revision consists of a request to incorporate by reference a MDE departmental order that establishes an alternative VOC emission standard for NGC as it appears in the permit-to-construct conditions issued by MDE in order to ensure that it remains a minor stationary source of VOCs. The alternative VOC emissions limit of 195 pounds per operating day with at least a 99% overall VOC control efficiency will achieve a stringent emissions discharge reduction and is more stringent than any established standard for reasonably available control technology (RACT) for major stationary sources of VOCs in COMAR 26.11.19. Under the Code of Maryland Regulations (COMAR) 26.11.06.06E—"Exceptions," a source may request an exception to a VOC emissions limit from MDE if the source is not subject to new source review (NSR) and if the source is unable to comply with COMAR 26.11.06.06B—"Control of VOC from Installations."

Located in the Baltimore ozone nonattainment area, NGC is a wallboard manufacturing facility that emits both nitrogen oxides (NO<sub>x</sub>) and VOCs. Ground level ozone is formed when NO<sub>x</sub> and VOCs react in the presence of sunlight. NO<sub>x</sub> and VOC are referred to as ozone precursors and are emitted by many types of pollution sources, including motor vehicles, power plants, industrial facilities, and area wide sources, such as consumer products and lawn and garden equipment. Scientific evidence indicates that adverse public health effects occur following exposure to ozone. These effects are more pronounced in children and adults with lung disease. Breathing air containing

ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases. In response to this scientific evidence, EPA promulgated in 1979 the first ozone national ambient air quality standard (NAAQS), the 0.12 part per million (ppm) 1-hour ozone NAAQS. See 44 FR 8202 (February 8, 1979).<sup>1</sup> Under the 1979 1-hour ozone NAAQS, the Baltimore Area (specifically, Anne Arundel County, Baltimore City, Baltimore County, Carroll County, Harford County, and Howard County) was designated as a severe nonattainment area. 56 FR 56694 (November 6, 1991). On July 18, 1997, EPA revised the health-based NAAQS for ozone based on 8-hour average concentrations. 62 FR 38856. Under the 1997 8-hour ozone NAAQS, the Baltimore Area was designated as a moderate nonattainment area. 69 FR 23858 (April 30, 2004). Later, the Baltimore Area was reclassified as a serious nonattainment area for the 1997 8-hour ozone NAAQS. 77 FR 4901 (February 1, 2012). On March 27, 2008 (78 FR 16436), EPA strengthened the 8-hour ozone NAAQS (2008 8-hour ozone NAAQS). Under the 2008 8-hour ozone NAAQS, the Baltimore Area was designated as a moderate nonattainment area. 69 FR 23858 (April 30, 2004).

On April 30, 2004 (69 FR 23858), EPA announced its revocation of the 1979 1-hour ozone NAAQS for all purposes and for all areas in the country, effective June 15, 2005. In the final rulemaking, EPA determined that certain nonattainment planning requirements would continue to be in effect under the revoked standard for nonattainment areas under the 1979 1-hour ozone NAAQS, including RACT. Under the anti-backsliding provisions codified at 40 CFR 51.905, the Baltimore Area remains subject to the anti-backslide obligations for the revoked 1979 1-hour ozone NAAQS. Since the Baltimore Area was designated as a severe nonattainment area for the 1979 1-hour ozone NAAQS, all sources in the nonattainment area emitting greater than 25 tons per year (tpy) of VOC or NO<sub>x</sub> are major stationary sources.

NGC is a major stationary source of NO<sub>x</sub>, but is not a major stationary source for VOCs. NGC consists of two major manufacturing lines, Board Kiln No. 1 and Board Kiln No. 2. When NGC modified Board Kiln No. 1 to manufacture new silicone wallboard products, NGC needed limits to remain a minor stationary source of VOC (under

<sup>1</sup> EPA had previously promulgated a NAAQS for total photochemical oxidants.

25 tpy) and avoid NSR review under COMAR 26.11.17 as the production of the new silicone products would emit more VOC emissions from the source. However, NGC was subject to VOC emission limits in COMAR 26.11.06.06. Since Board Kiln No. 1 was installed before May 12, 1972, COMAR 26.11.06.06B(1)(a) would require its VOC emissions to be less than 200 pounds per day (lbs/day) unless the discharge is reduced by 85 percent or more overall. As Board Kiln No. 2 was installed in April 1998, it is subject to COMAR 26.11.06.06B(1)(b), which, except as provided in COMAR 26.11.06.06E, limits the discharge of VOC to not exceed 20 lbs/day unless the discharge is reduced by 85 percent or more overall. As a result of the increased production, NGC was unable to comply with COMAR 26.11.06.06B and is thus eligible to apply for an exception under COMAR 26.11.06.06E. However, exceptions under COMAR 26.11.06.06E require EPA approval of specific emission limitations and operating practices in order to become federally enforceable. MDE entered a consent order with NGC on March 11, 2016 establishing alternative VOC emissions limits for Board Kiln No. 1 and Board Kiln No. 2 that would become part of NGC's permit to operate. The permit restrictions approved for NGC, based on MDE's order, will ensure that NGC remains a federally enforceable minor stationary source with appropriate emission limitations and practices and not subject to NSR for its modification to Board Kiln No. 1.

## II. Summary of SIP Revision and EPA Analysis

In the June 24, 2016 SIP submittal, MDE included an order authorizing an alternative VOC emissions standard per COMAR 26.11.06.06E in connection with the construction permit modification MDE prepared for NGC. MDE requested EPA incorporate by reference the order with the alternative VOC emissions standard into the Maryland SIP. The MDE order for NGC requires that NGC comply with the following alternative VOC standards and other conditions: (1) NGC shall install a regenerative thermal oxidizer (RTO) on Board Kiln No. 1, which is designed to achieve at least a 99% overall VOC control efficiency, or not greater than 0.5 parts per million by volume (ppmv) of VOC in the flue gases exiting the RTO (which is more restrictive for Board Kiln No. 1); (2) total VOC emissions from Board Kiln No. 1 and Board Kiln No. 2, combined, shall not exceed 195 pounds per operating day (which is more stringent than Board

Kiln No. 1 subject to 200 lbs/day and Board Kiln No. 2 subject to 20 lbs/day, separately); (3) total premises wide VOC emissions shall be less than 25 tons in any rolling 12-month period to ensure that the total net VOC emissions increase resulting from the modification of Board Kiln No. 1 and Board Kiln No. 2, combined, is less than the nonattainment NSR threshold, which is 25 tons in any rolling 12-month period; (4) NGC shall vent the flue gases from Board Kiln No. 1 through the RTO prior to discharging to the atmosphere when manufacturing silicone XP water resistant wallboard and eXP water resistant wallboard; (5) the temperature of the combustion zone of the RTO shall be maintained to at least the minimum temperature established during the most recent stack emissions tests demonstrating compliance with the daily VOC emission limit of 195 pounds per operating day; (6) NGC shall manufacture regular wallboard (any wallboard that is not silicone XP water resistant wallboard or eXP water resistant wallboard and is not prohibited for production by MDE) only in Board Kiln No. 2; and (7) NGC shall monitor daily production for each type of wallboard and shall calculate total daily VOC emissions from Board Kiln No. 1 and Board Kiln No. 2 to demonstrate compliance with the alternative VOC emission standard of 195 pounds per operating day.

After evaluating this SIP revision, EPA concludes that this SIP revision continues to address and minimize VOC emissions in the Baltimore ozone nonattainment area and will result in reduced VOC emissions from NGC. The alternative VOC emissions limit for NGC will significantly reduce emissions of VOC, an ozone precursor. EPA finds this Order to be a SIP strengthening measure in accordance with requirements in section 110 of the CAA. EPA finds that the submittal strengthens the State of Maryland's SIP and is in accordance with section 110 of the CAA including 110(a) and 110(l) as the SIP revision will not interfere with reasonable further progress, attainment of any NAAQS or any other applicable CAA requirements as more VOC emissions reduction is expected from this limit on NGC's VOC emissions.

## III. Final Action

EPA is approving the Maryland June 2016 SIP revision submittal which requests incorporation by reference of a MDE order that includes an alternative VOC emission standard for NGC as the revision meets requirements in CAA section 110. EPA is publishing this rule without prior proposal because EPA

views this as a noncontroversial amendment and anticipates no adverse comment. However, in the "Proposed Rules" section of this issue of the **Federal Register**, EPA is publishing a separate document that will serve as the proposal to approve the SIP revision if adverse comments are filed. This rule will be effective on *November 27, 2017* without further notice unless EPA receives adverse comment by *September 27, 2017*. If EPA receives adverse comment, EPA will publish a timely withdrawal in the **Federal Register** informing the public that the rule will not take effect. EPA will address all public comments in a subsequent final rule based on the proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. Please note that if EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment.

## IV. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of Maryland's Department of the Environment Order No. 510-0233-6-0646 and -1569. EPA has made, and will continue to make, these materials generally available through [www.regulations.gov](http://www.regulations.gov) and/or at the EPA Region III Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information). Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA's approval, and will be incorporated by reference by the Director of the Federal Register in the next update of the SIP compilation.<sup>2</sup>

## V. Statutory and Executive Order Reviews

### A. General Requirements

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a).

<sup>2</sup> 62 FR 27968 (May 22, 1997).

Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible

methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

*B. Submission to Congress and the Comptroller General*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. section 804, however, exempts from section 801 the following types of rules: Rules of particular applicability; rules relating to agency management or personnel; and rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C. 804(3). Because this is a rule of particular applicability, EPA is not required to submit a rule report regarding this action under section 801.

*C. Petitions for Judicial Review*

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with

objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the proposed rules section of this issue of the **Federal Register**, rather than file an immediate petition for judicial review of this direct final rule, so that EPA can withdraw this direct final rule and address the comment in the proposed rulemaking action.

This action, which approves Maryland's SIP revision incorporating by reference a MDE order establishing a VOC emission standard for NGC, may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: August 12, 2017.

**Cecil Rodrigues**,  
*Acting Regional Administrator, Region III.*

40 CFR part 52 is amended as follows:

**PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

- 1. The authority citation for part 52 continues to read as follows:

*Authority:* 42 U.S.C. 7401 *et seq.*

**Subpart V—Maryland**

- 2. In § 52.1070, the table in paragraph (d) is amended by adding the entry for National Gypsum Company at the end of the table to read as follows:

**§ 52.1070 Identification of plan.**

\* \* \* \* \*  
(d) \* \* \*

**EPA APPROVED STATE SOURCE-SPECIFIC REQUIREMENTS**

Name of source	Permit number/type	State effective date	EPA approval date	Additional explanation
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
National Gypsum Company (NGC).	Departmental Order .....	03/11/16	8/28/17 [ <i>Insert Federal Register citation</i> ].	The SIP approval includes specific alternative volatile organic compound emission limits and other conditions for NGC as established by the Departmental Order.

**ENVIRONMENTAL PROTECTION  
AGENCY**
**40 CFR Parts 52 and 81**

[EPA-R04-OAR-2017-0086; FRL-9966-93-Region 4]

**Air Plan Approval and Air Quality  
Designation; TN; Redesignation of the  
Knoxville 2006 24-hour PM<sub>2.5</sub>  
Nonattainment Area to Attainment**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** On December 20, 2016, Tennessee, through the Tennessee Department of Environment and Conservation (TDEC), submitted a request for the Environmental Protection Agency (EPA) to redesignate the Knoxville-Sevierville-La Follette, TN fine particulate matter (PM<sub>2.5</sub>) nonattainment area (hereinafter referred to as the “Knoxville Area” or “Area”) to attainment for the 2006 24-hour PM<sub>2.5</sub> national ambient air quality standards (NAAQS) and to approve a state implementation plan (SIP) revision containing a maintenance plan and a reasonably available control measures (RACM) determination for the Area. EPA is approving Tennessee’s RACM determination for the Knoxville Area and incorporating it into the SIP; approving Tennessee’s plan for maintaining the 2006 24-hour PM<sub>2.5</sub> NAAQS for the Knoxville Area (maintenance plan), including the associated motor vehicle emission budgets (MVEBs) for nitrogen oxides (NO<sub>x</sub>) and direct PM<sub>2.5</sub> for the years 2014 and 2028, and incorporating it into the SIP; and redesignating the Knoxville Area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

**DATES:** This rule is effective September 27, 2017.

**ADDRESSES:** EPA has established a docket for this action under Docket Identification No. EPA-R04-OAR-2017-0086. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information may not be publicly available, *i.e.*, Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air Regulatory Management Section, Air Planning and Implementation Branch, Air, Pesticides and Toxics

Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW., Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office’s official hours of business are Monday through Friday 8:30 a.m. to 4:30 p.m., excluding federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Sean Lakeman of the Air Regulatory Management Section, in the Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street SW., Atlanta, Georgia 30303-8960. Sean Lakeman may be reached by phone at (404) 562-9043, or via electronic mail at [lakeman.sean@epa.gov](mailto:lakeman.sean@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Background**

On July 18, 1997, EPA promulgated the first air quality standards for PM<sub>2.5</sub>. EPA promulgated an annual standard at a level of 15.0 micrograms per cubic meter (µg/m<sup>3</sup>), based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations. In the same rulemaking, EPA promulgated a 24-hour standard of 65 µg/m<sup>3</sup>, based on a 3-year average of the 98th percentile of 24-hour concentrations. On October 17, 2006 (71 FR 61144), EPA retained the annual average NAAQS at 15.0 µg/m<sup>3</sup> but revised the 24-hour NAAQS to 35 µg/m<sup>3</sup>, based again on the 3-year average of the 98th percentile of 24-hour concentrations.

On November 13, 2009, at 74 FR 58688, EPA designated the Knoxville Area as nonattainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS. All 2006 PM<sub>2.5</sub> NAAQS areas were designated under title I, part D, subpart 1 (hereinafter “Subpart 1”). Subpart 1 contains the general requirements for nonattainment areas for any pollutant governed by a NAAQS and is less prescriptive than the other subparts of title I, part D. On April 25, 2007 (72 FR 20586), EPA promulgated its Clean Air Fine Particle Implementation Rule, codified at 40 CFR part 51, subpart Z, in which the Agency provided guidance for state and tribal plans to implement the PM<sub>2.5</sub> NAAQS. The United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanded the Clean Air Fine Particle Implementation Rule and the final rule entitled “Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>)” (73 FR 28321, May 16, 2008) (collectively, “1997 PM<sub>2.5</sub>

Implementation Rules”) to EPA on January 4, 2013, in *Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the 1997 PM<sub>2.5</sub> NAAQS pursuant to the general implementation provisions of Subpart 1, rather than the particulate matter-specific provisions of title I, part D, subpart 4 (hereinafter “Subpart 4”).

On June 2, 2014, EPA published a rule entitled “Identification of Nonattainment Classification and Deadlines for Submission of State Implementation Plan (SIP) Provisions for the 1997 Fine Particle (PM<sub>2.5</sub>) National Ambient Air Quality Standard (NAAQS) and 2006 PM<sub>2.5</sub> NAAQS”. See 79 FR 31566. In that rule, the Agency responded to the D.C. Circuit’s January 2013 decision by identifying all PM<sub>2.5</sub> nonattainment areas for the 1997 and 2006 PM<sub>2.5</sub> NAAQS as “moderate” nonattainment areas under Subpart 4, and by establishing a new SIP submission date of December 31, 2014, for moderate area attainment plans and for any additional attainment-related or nonattainment new source review plans necessary for areas to comply with the requirements applicable under Subpart 4. *Id.* at 31567-70.

Based on its moderate nonattainment area classification, Tennessee was required to submit a SIP revision addressing RACM pursuant to CAA section 172(c)(1) and section 189(a)(1)(C) for the Area. Although EPA does not believe that section 172(c)(1) and section 189(a)(1)(C) RACM must be approved into a SIP prior to redesignation of an area to attainment once that area is attaining the NAAQS, EPA is approving Tennessee’s RACM determination and incorporating it into its SIP pursuant to a recent decision by the United States Court of Appeals for the Sixth Circuit in *Sierra Club v. EPA*, 793 F.3d 656 (6th Cir. 2015).

In a notice of proposed rulemaking (NPRM) published on May 30, 2017 (82 FR 24621), EPA proposed to: (1) Approve Tennessee’s RACM determination for the Knoxville Area pursuant to CAA sections 172(c)(1) and 189(a)(1)(C) and incorporate it into the SIP; (2) approve Tennessee’s plan for maintaining the 2006 24-hour PM<sub>2.5</sub> NAAQS (maintenance plan), including the associated 2014 and 2028 MVEBs for PM<sub>2.5</sub> and NO<sub>x</sub> for the Knoxville Area, and incorporate it into the SIP; and (3) redesignate the Knoxville Area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS.<sup>1</sup> The details of Tennessee’s

<sup>1</sup> In a notice published in the *Federal Register* on March 10, 2017, EPA announced that it had found the MVEBs for the Knoxville Area for the 2006 24-

submittal and the rationale for EPA's actions are explained in the NPRM. EPA did not receive any adverse comments on the proposed action.

## II. What are the effects of these actions?

EPA's approval of Tennessee's redesignation request changes the legal designation of Anderson, Blount, Knox, and Loudon Counties and a portion of Roane County for the 2006 24-hour PM<sub>2.5</sub> NAAQS, found at 40 CFR part 81, from nonattainment to attainment. Approval of Tennessee's associated SIP revision also incorporates a plan for maintaining the 2006 24-hour PM<sub>2.5</sub> NAAQS in the Area through 2028 and Tennessee's RACM determination into the Tennessee SIP. The maintenance plan includes contingency measures to remedy any future violations of the 2006 24-hour PM<sub>2.5</sub> NAAQS and procedures for evaluation of potential violations. The maintenance plan also includes NO<sub>x</sub> and PM<sub>2.5</sub> MVEBs for 2014 and 2028 for the Knoxville Area. The 2014 and 2028 PM<sub>2.5</sub> MVEBs are 1.22 tons per day (tpd) and 0.67 tpd, respectively. The 2014 and 2028 NO<sub>x</sub> MVEBs are 42.73 tpd and 19.65 tpd, respectively.

## III. Final Actions

EPA is taking the following final actions: (1) Approving Tennessee's RACM determination for the Knoxville Area pursuant to CAA sections 172(c)(1) and 189(a)(1)(C) and incorporating it into the SIP; (2) approving Tennessee's plan for maintaining the 2006 24-hour PM<sub>2.5</sub> NAAQS (maintenance plan), including the associated 2014 and 2028 MVEBs for the Knoxville Area, and incorporating it into the SIP; and (3) redesignating the Knoxville Area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

Approval of the redesignation request changes the official designation of Anderson, Blount, Knox, and Loudon Counties and a portion of Roane County for the 2006 24-hour PM<sub>2.5</sub> NAAQS, found at 40 CFR part 81, from nonattainment to attainment.

## IV. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself

hour PM<sub>2.5</sub> NAAQS adequate for transportation conformity purposes. See 82 FR 13347.

create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. See 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these actions merely approve state law as meeting federal requirements and do not impose additional requirements beyond those imposed by state law. For that reason, these actions:

- Are not significant regulatory actions subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January, 21, 2011);
- do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- will not have disproportionate human health or environmental effects under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose

substantial direct costs of tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action 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 publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by October 27, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See section 307(b)(2).

## List of Subjects

### 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

### 40 CFR Part 81

Environmental protection, Air pollution control.

Dated: August 16, 2017.

## V. Anne Heard,

Acting Regional Administrator, Region 4.

40 CFR parts 52 and 81 are amended as follows:

## PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

- 1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

**Subpart RR—Tennessee**

■ 2. Section 52.2220(e) is amended by adding entries for “2006 24-hour PM<sub>2.5</sub> Maintenance Plan for the Knoxville-

Sevierville-La Follette Area” and “RACM determination for the Knoxville-Sevierville-La Follette Area for the 2006 24-hour PM<sub>2.5</sub> NAAQS” at the end of the table to read as follows:

**§ 52.2220 Identification of plan.**  
\* \* \* \* \*  
(e) \* \*

**EPA-APPROVED TENNESSEE NON-REGULATORY PROVISIONS**

Name of non-regulatory SIP provision	Applicable geographic or nonattainment area	State effective date	EPA approval date	Explanation
2006 24-hour PM <sub>2.5</sub> Maintenance Plan for the Knoxville-Sevierville-La Follette Area.	Anderson, Blount, Knox, and Loudon Counties and a portion of Roane County (the area described by U.S. Census 2000 block group identifier 47-145-0307-2.).	12/20/2016	8/28/2017 [Insert citation of publication].	
RACM determination for the Knoxville-Sevierville-La Follette Area for the 2006 24-hour PM <sub>2.5</sub> NAAQS.	Anderson, Blount, Knox, and Loudon Counties and a portion of Roane County (the area described by U.S. Census 2000 block group identifier 47-145-0307-2.).	12/20/2016	8/28/2017 [Insert citation of publication].	

**PART 81—DESIGNATION OF AREAS FOR AIR QUALITY PLANNING PURPOSES**

■ 3. The authority citation for part 81 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*  
■ 4. In § 81.343, the table entitled “Tennessee—2006 24-Hour PM<sub>2.5</sub> NAAQS” is amended by revising the

entry for “Knoxville-Sevierville-La Follette, TN:” to read as follows:  
**§ 81.343 Tennessee.**  
\* \* \* \* \*

**TENNESSEE—2006 24-HOUR PM<sub>2.5</sub> NAAQS**  
[Primary and secondary]

Designated area	Designation <sup>a</sup>		Classification	
	Date <sup>1</sup>	Type	Date <sup>2</sup>	Type
Knoxville-Sevierville-La Follette, TN:	8/28/2017	Attainment		
Anderson County		Attainment		
Blount County		Attainment		
Knox County		Attainment		
Loudon County		Attainment		
Roane County (part)		Attainment		
The area described by U.S. Census 2000 block group identifier 47-145-0307-2..				

<sup>a</sup> Includes Indian Country located in each county or area, except as otherwise specified.  
<sup>1</sup> This date is 30 days after November 13, 2009, unless otherwise noted.  
<sup>2</sup> This date is July 2, 2014, unless otherwise noted.

\* \* \* \* \*  
[FR Doc. 2017-18088 Filed 8-25-17; 8:45 am]  
BILLING CODE 6560-50-P

**DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**50 CFR Part 300**  
[Docket No. 160422356-7283-02]  
**RIN 0648-XF630**  
**International Fisheries; Pacific Tuna Fisheries; 2017 Commercial Pacific Bluefin Tuna Fishery Closure in the Eastern Pacific Ocean**  
**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and

Atmospheric Administration (NOAA), Commerce.  
**ACTION:** Temporary rule; closure.  
**SUMMARY:** NMFS is temporarily closing the U.S. commercial fishery for Pacific bluefin tuna in the eastern Pacific Ocean (EPO) through December 31, 2017, because the 2017 catch limit of 425 metric tons has been exceeded. This action is necessary to prevent the fishery from further exceeding the applicable catch limit established by the Inter-American Tropical Tuna Commission (IATTC) in Resolution C-16-08 (Measures for the Conservation and Management of Pacific Bluefin Tuna in the Eastern Pacific Ocean).

**DATES:** The rule is effective 12 a.m. local time August 28, 2017, through 11:59 p.m. local time December 31, 2017.

**FOR FURTHER INFORMATION CONTACT:** Celia Barroso, NMFS West Coast Region, 562-432-1850.

**SUPPLEMENTARY INFORMATION:** The United States is a member of the IATTC, which was established under the Convention for the Establishment of an Inter-American Tropical Tuna Commission signed in 1949 (Convention). The Convention provides an international agreement to ensure the effective international conservation and management of highly migratory species of fish in the IATTC Convention Area. The IATTC Convention Area, as amended by the Antigua Convention, includes the waters of the EPO bounded by the coast of the Americas, the 50° N. and 50° S. parallels, and the 150° W. meridian.

Fishing for Pacific bluefin tuna in the EPO is managed, in part, under the Tuna Conventions Act as amended (Act), 16 U.S.C. 951-962. Under the Act, NMFS must publish regulations to carry out recommendations of the IATTC that have been approved by the Department of State (DOS). Regulations governing fishing by U.S. vessels in accordance with the Act appear at 50 CFR part 300, subpart C. These regulations implement IATTC recommendations for the conservation and management of highly migratory fish resources in the EPO.

In 2016, the IATTC adopted Resolution C-16-08, which establishes a 600 metric ton (mt) catch limit of Pacific bluefin tuna applicable to U.S. commercial fishing vessels in 2017 and 2018, combined. Additionally, catch is not to exceed 425 mt in a single year; therefore, the annual limit in 2017 is 425 mt. With the approval of the DOS, NMFS implemented this catch limit by notice-and-comment rulemaking under the Act (82 FR 18704, April 21, 2017, and codified at 50 CFR 300.25).

NMFS, through monitoring landings data and other available information, has determined that the 2017 catch limit has been exceeded. In accordance with 50 CFR 300.25(g), this **Federal Register** notice announces that the U.S. fishery for Pacific bluefin tuna in the IATTC Convention Area will be closed starting on August 28, 2017, through the end of the 2017 calendar year. The 2018 catch limit will be calculated by subtracting the amount caught in 2017 from 600 mt.

During the closure, a U.S. fishing vessel may not be used to target, retain on board, transship, or land Pacific bluefin tuna captured in the IATTC Convention Area, except as follows: Any Pacific bluefin tuna already on

board a fishing vessel on August 28, 2017, may be retained on board, transshipped, and/or landed, to the extent authorized by applicable laws and regulations, provided all Pacific bluefin tuna are landed within 14 days after the effective date of this rule, that is, no later than September 11, 2017.

#### Classification

NMFS has determined there is good cause to waive prior notice and opportunity for public comment pursuant to 5 U.S.C. 553(b)(B). This action is based on the best available information and is necessary for the conservation and management of Pacific bluefin tuna. Compliance with the notice and comment requirement would be impracticable and contrary to the public interest because NMFS would be unable to ensure that the 2017 Pacific bluefin tuna catch limit is not further exceeded, and that biennial limit of 600mt is also not exceeded. For the same reasons, NMFS has also determined there is good cause to waive the requirement for a 30-day delay in effectiveness under 5 U.S.C. 553(d)(3).

This action is required by § 300.25(a) and is exempt from review under Executive Order 12866.

**Authority:** 16 U.S.C. 951 *et seq.*

Dated: August 23, 2017.

**Alan D. Risenhoover,**

*Director, Office of Sustainable Fisheries, National Marine Fisheries Service.*

[FR Doc. 2017-18157 Filed 8-23-17; 4:15 pm]

**BILLING CODE 3510-22-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 648

[Docket No. 161025999-7662-02]

RIN 0648-BG42

### Fisheries of the Northeastern United States; Mid-Atlantic Unmanaged Forage Omnibus Amendment

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** NMFS partially approves and implements through regulations measures included in the Mid-Atlantic Unmanaged Forage Omnibus Amendment, as adopted by the Mid-Atlantic Fishery Management Council and approved by NMFS on June 13, 2017. The purpose of this action is to

prevent the development of new, and the expansion of existing, commercial fisheries on certain forage species until the Council has adequate opportunity and information to evaluate the potential impacts of forage fish harvest on existing fisheries, fishing communities, and the marine ecosystem. This final rule implements an annual landing limit, possession limits, and permitting and reporting requirements for Atlantic chub mackerel and certain previously unmanaged forage species and species groups caught within Mid-Atlantic Federal waters; allows vessels to transit Mid-Atlantic Federal waters with forage species caught in other areas; and identifies measures that can be revised through a future framework adjustment.

**DATES:** This rule is effective September 27, 2017

**ADDRESSES:** The Council prepared an environmental assessment (EA) for the Mid-Atlantic Unmanaged Forage Omnibus Amendment that describes the Council's preferred management measures and other alternatives considered and provides a thorough analysis of the impacts of the all alternatives considered. Copies of the Mid-Atlantic Unmanaged Forage Species Omnibus Amendment, including the EA, the Regulatory Impact Review, and the Regulatory Flexibility Act analysis are available from: Christopher Moore, Executive Director, Mid-Atlantic Fishery Management Council, Suite 201, 800 State Street Dover, DE 19901. The supporting documents are also accessible via the Internet at:

- <https://www.regulations.gov/docket?D=NOAA-NMFS-2017-0013>
- <https://www.greateratlantic.fisheries.noaa.gov/regs/2017/April/17/ForageOmnibusAmendmentpr.html> or
- <http://www.maafmc.org/actions/unmanaged-forage>.

Copies of the small entity compliance guide prepared for this action are available from John K. Bullard, Regional Administrator, NMFS, Greater Atlantic Regional Fisheries Office, 55 Great Republic Drive, Gloucester, MA 01930-2298, or available on the internet at: <https://www.greateratlantic.fisheries.noaa.gov/sustainable/species/forage/index.html>.

Written comments regarding the burden-hour estimates or other aspects of the collection-of-information requirements contained in this final rule may be submitted to the Greater Atlantic Regional Fisheries Office and by email to [OIRA\\_Submission@omb.eop.gov](mailto:OIRA_Submission@omb.eop.gov) or fax to (202) 395-5806.

**FOR FURTHER INFORMATION CONTACT:**

Douglas Christel, Fishery Policy Analyst, (978) 281-9141, fax (978) 281-9135.

**SUPPLEMENTARY INFORMATION:****Background**

On August 8, 2016, the Council adopted final measures under the Mid-Atlantic Unmanaged Forage Omnibus Amendment. On November 23, 2016, the Council submitted the amendment and draft EA to NMFS for preliminary review, with final submission of the draft amendment and EA on March 20, 2017. NMFS published a Notice of Availability in the **Federal Register** on March 28, 2017 (82 FR 15311), informing the public that the Council had submitted this amendment to the Secretary of Commerce for review and approval. NMFS published a proposed rule that included implementing regulations on April 24, 2017 (82 FR 18882). The public comment period for both the Notice of Availability and proposed rule ended on May 30, 2017.

The Council developed the Mid-Atlantic Unmanaged Forage Omnibus Amendment and the measures described in the proposed rule under the discretionary provision specified in section 303(b)(12) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801, *et seq.*; 1853(b)(12)). The objective of this action is to prevent the development of new, and the expansion of existing, commercial fisheries on certain forage species until the Council has adequate opportunity and information to evaluate the potential impacts of forage fish harvest on existing fisheries, fishing communities, and the marine ecosystem. The two primary purposes of this action are to: (1) Advance an ecosystem approach to fisheries management in the Mid-Atlantic through consideration of management alternatives that would afford protection to currently unmanaged forage species by regulating landings and/or possession of those species; and (2) consider management alternatives to address data collection and reporting of landings of currently unmanaged forage species. Details concerning the development of these measures are contained in the EA prepared for this action and summarized in the preamble of the proposed rule, and, therefore, are not repeated here.

**Disapproved Measures***Designation of Bullet and Frigate Mackerel as Ecosystem Component (EC) Species*

The Magnuson-Stevens Act permits NMFS to approve, partially approve, or disapprove measures proposed by the Council based only on whether the measures are consistent with the fishery management plan, the Magnuson-Stevens Act and its National Standards, and other applicable law. Following the consideration of public comment and additional review of this action and supporting analysis, NMFS concluded that the inclusion of bullet and frigate mackerel as EC species is inconsistent with National Standard 2 of the Magnuson-Stevens Act regarding the use of best available scientific information.

The best available scientific information presented for this amendment does not support the proposed designation of bullet and frigate mackerel as forage for species managed by the Council. Because this action is an amendment to the Council's existing FMPs, the species that are included in the amendment must be a forage species and also must be linked to one or more FMP fisheries, either as prey for the managed species or as bycatch in the managed fisheries. This is consistent with our understanding of Council intent, as documented in the March 2016 Fishery Management Action Team meeting summary. As a result, NMFS asserted that this amendment needed to establish a logical connection between the species proposed as forage and at least one managed species. During the development of this action and in the proposed rule, NMFS advised the Council and the public that bullet and frigate mackerel do not meet the criteria used to identify forage for species regulated by the Council.

Although the Council did not rely exclusively on the forage criteria identified by the Council's Scientific and Statistical Committee (SSC), as summarized in Table 5 of the EA, the forage criteria served as the initial foundation for evaluating species to include in this action. These criteria establish general parameters, including adult size, trophic level, and whether the species comprised a considerable portion of the diet of other predators, among other criteria, to determine whether a species is forage for another species. The adult sizes of bullet and frigate mackerel (20-24 inches (51-61 cm) total length) are larger than the size ranges identified for other forage species included in this action, which average

7 inches (18 cm) in total length. Thus, the adult sizes of bullet and frigate mackerel are more than double the forage fish size range recommended by the Council's SSC (1-10 inches (2-25 cm) total length). Bullet and frigate mackerel feed on most of the other forage species included in this amendment, confirming their higher trophic classification. This is inconsistent with the SSC's classification criteria that forage species are typically low to mid trophic level species that consume very small prey less than 1-inch long (2-2.5 cm), typically zooplankton and/or small benthic invertebrates. While the amendment includes some information suggesting that these species are consumed by large pelagic species such as tunas, billfish, and sharks, it is not clear what portion of the diet of these species that bullet and/or frigate mackerel represent. As a result, while bullet and frigate mackerel may be prey for large pelagic species, it is unknown whether they constitute forage for large pelagic species in the marine ecosystem, as defined by the SSC. Finally, even applying the lower forage thresholds used by the Council (*i.e.*, the presence of forage species in at least two stomach content samples over a 40-year period of NMFS surveys), there is no scientific evidence presented in this amendment that indicates bullet and frigate mackerel are forage for managed species. Thus, the best available scientific information does not support the classification of these species as forage for managed species, and NMFS determined that including them would be inconsistent with National Standard 2 of the Magnuson-Stevens Act.

Other criteria considered by the Council to classify forage species for this amendment include the presence of such species as bycatch in managed fisheries and the potential for commercial exploitation. While there is evidence that a small amount of bullet mackerel was caught with bottom trawl gear that resulted in the landings of species managed by the Council, the information and analysis indicate co-occurrence that is not necessarily indicative of systematic bycatch in those fisheries. Many unmanaged species co-occur with managed species, but that does not make them forage for the managed species or susceptible to routine bycatch in targeted fisheries for managed species. NMFS concluded that available information is not sufficient to suggest that bullet mackerel are systematically caught as bycatch in managed fisheries. With no dealer reported landings of bullet mackerel, and an average of less than 7,500 lb (3.4

mt) of frigate mackerel reported landed each year between 1996–2015, including several years when less than 1,000 lb (0.4 mt) was landed, there is limited information to support that these species are caught as bycatch in managed fisheries or will be subject to commercial exploitation at this time.

Finally, the best available information does not support the Council's determination that bullet and frigate mackerel should be classified as EC species based upon the National Standard Guidelines at 50 CFR 600.305. As defined in § 600.305(d)(11) and noted during the April 2016 Council meeting, EC species should not include target stocks that are caught for sale or personal use. However, the amendment includes evidence that bullet and frigate mackerel are caught and sold by commercial vessels and are retained for personal use as bait by recreational fisheries in Federal waters, creating competing interests and conflicts among user groups, both of which are criteria that could exclude consideration of bullet and frigate mackerel as EC species under the National Standard Guidelines. The Council could consider alternative mechanisms to protect and manage these and other similar species, such as little tunny/false albacore and bonito, for the benefits they provide to the marine ecosystem and important commercial and recreational fisheries within the Mid-Atlantic. This is consistent with the May 19, 2017, discussion by the Ecosystem and Ocean Planning Committee (EOPC). If the Council believes that these species require conservation and management, a small tuna FMP or a broader ecosystem based management action may be a more effective vehicle to manage these species than an amendment predicated on protecting forage for managed species. This would allow the Council to develop a management approach and measures that would reflect the unique role these species play in the marine ecosystem, and to better integrate the concerns of and impacts to the predominantly recreational fishery for these species. Such an approach is supported by not only the EOPC, but also by members of the public commenting on this action.

### Approved Measures

#### 1. Designation of Certain Mid-Atlantic Forage Species as Ecosystem Component Species

This action designates the following forage species and species groups as EC species in all of the FMPs under the Council's jurisdiction:

- Anchovies (family Engraulidae)

- Argentines (family Argentinidae)
- Greeneyes (family Chlorophthalmidae)
- Halfbeaks (family Hemiramphidae)
- Herrings and Sardines (family Clupeidae)
- Lanternfishes (family Myctophidae)
- Pearlsides (family Sternoptychidae)
- Sand lances (family Ammodytidae)
- Silversides (family Atherinopsidae)
- Cusk-eels (order Ophidiiformes)
- Atlantic Saury-*Scomberesox saurus*
- Pelagic Mollusks (except Sharptail Shortfin Squid)
- Copepods, Krill, Amphipods, and Other Species Under One Inch as Adults

The Magnuson-Stevens Act contains no requirements to designate EC species. To minimize confusion and reflect the purpose of this action to manage forage species, these species will be collectively referred to as "Mid-Atlantic forage species" for the remainder of this preamble discussion and in the final regulatory text.

#### 2. Permit and Reporting Requirements

This action requires any commercial vessel, operator, or dealer that lands or sells Mid-Atlantic forage species and Atlantic chub mackerel to comply with existing Federal permit and reporting requirements. Any commercial fishing vessel that possesses, lands, or sells Mid-Atlantic forage species or chub mackerel caught in Federal waters from New York through Cape Hatteras, North Carolina (an area referred to as the "Mid-Atlantic Forage Species Management Unit" below and in the regulations), must be issued a valid commercial fishing vessel permit issued by the Greater Atlantic Regional Fisheries Office (GARFO). Any commercial vessel operator fishing for or possessing these species in or from the Mid-Atlantic Forage Species Management Unit must obtain and retain on board a valid operator permit issued by GARFO. Similarly, a seafood dealer purchasing and selling these species must obtain a valid commercial seafood dealer permit issued by GARFO.

Vessel operators and dealers are required to report the catch and sale of these species and species groups on existing vessel trip reports (logbooks) and dealer reports, respectively. NMFS and Council staff prepared a species identification guide to help vessel operators and dealers differentiate among these forage species and identify the codes needed to accurately report these on vessel logbooks and dealer reports. We will send this guide to all vessels that landed in Mid-Atlantic ports during 2016 and make it available

on both the GARFO and Council Web sites (see **ADDRESSES**) and through your local NMFS port agent office (see <https://www.greateratlantic.fisheries.noaa.gov/sed/portagents/portagents.html>).

The permit and reporting requirements mentioned above for vessels, operators, and dealers fishing for, possessing, and purchasing chub mackerel are effective through December 31, 2020, unless overwritten by another Council or NMFS action. This is because the Council is currently developing potential long-term measures and assembling the scientific information necessary to consider formally integrating chub mackerel as a stock in the fishery managed under the Atlantic Mackerel, Squid, and Butterfish FMP.

#### 3. Annual Landing Limits

This action sets an annual landing limit of 2.86 million lb (1,297 mt) for Atlantic chub mackerel. All landings of chub mackerel in ports from Maine through North Carolina will count against the annual landings limit. NMFS will close the directed fishery for chub mackerel in the Mid-Atlantic Forage Species Management Unit once the Regional Administrator determines that 100 percent of the chub mackerel annual landing limit has been harvested. After the closure of the directed fishery, vessels would be subject to the chub mackerel incidental possession limit described below. As in the case for the permit and reporting requirements, the chub mackerel annual landing limit is effective through December 31, 2020, unless overwritten by a future Council or NMFS action.

#### 4. Possession Limits

This action establishes a 1,700-lb (771-kg) combined possession limit for all Mid-Atlantic forage species (see the list of EC species listed above) caught within the Mid-Atlantic Forage Species Management Unit. Initially, commercial vessels are not subject to a possession limit for chub mackerel. However, once the chub mackerel annual landing limit is harvested, NMFS will implement a 40,000-lb (18,144-kg) chub mackerel possession limit in the Mid-Atlantic Forage Species Management Unit. As in the case for the annual landing limit, the chub mackerel incidental possession limit will expire on December 31, 2020, unless overwritten by a future Council or NMFS action.

#### 5. Transit Provision

This action allows a vessel issued a Federal commercial fishing permit from GARFO that possesses Mid-Atlantic

forage species and chub mackerel in excess of the proposed possession limits to transit the Mid-Atlantic Forage Species Management Unit in certain circumstances. The following three conditions must be met to transit through the management unit: (1) Forage species were harvested outside of the Mid-Atlantic Forage Species Management Unit; (2) the vessel lands in a port that is outside of the Mid-Atlantic Forage Species Management Unit (*i.e.*, north of New York or south of Cape Hatteras, North Carolina); and (3) all gear is stowed and not available for immediate use. The transiting provision for vessels possessing chub mackerel is effective through December 31, 2020, unless overwritten by a future Council or NMFS action.

#### 6. Administrative Measures

This action allows the Council to modify the list of EC species, annual landing limits, and possession limits for Mid-Atlantic forage species and chub mackerel through a framework adjustment to applicable FMPs rather than through an amendment to these FMPs. Although the preamble of the proposed rule did not indicate that the list of EC species could be modified through a framework action, the proposed regulations did indicate that the list of Mid-Atlantic forage species (the same as the EC species listed above) could be modified in a framework action.

Under this action, the Council establishes a policy that requires use of an experimental fishing permit (EFP) to support any new fishery or the expansion of existing fisheries for Mid-Atlantic forage species. The Council would consider the results of any experimental fishing activity and other relevant information before deciding how to address future changes to the management of fisheries for Mid-Atlantic forage species. Pursuant to existing regulations at § 648.12, the Regional Administrator already consults with the Council's Executive Director before approving any exemption under an EFP request.

#### Comments and Responses

During the public comment periods for the Notice of Availability and the proposed rule for this amendment, we received 11,519 comments from 11,510 individuals. This included 11,484 form letters from Pew Charitable Trusts; comments from representatives of three commercial fishing entities/groups (Seafreeze Ltd., Lund's Fisheries Incorporated, and the Garden State Seafood Association (GSSA)); comments from three environmental organizations

(Pew Charitable Trusts, Wild Oceans, and the Audubon Society); and comments from the Office of Management and Budget. Two individuals expressed general opposition to the rule, while 11,506 individuals supported the action and 11 individuals supported some, but not all of the proposed measures. The following discussion summarizes the issues raised in the comments that were relevant to this action and associated NMFS's responses. Please note that, pursuant to section 304(a)(3) of the Magnuson-Stevens Act, when NMFS considers the responses to comments, NMFS may only approve or disapprove measures proposed in a particular fishery management plan, amendment, or framework adjustment, and may not change or substitute any measure in a substantive way.

#### General Comments

*Comment 1:* One individual expressed disappointment that the Council waited six years to protect forage species, indicating that the Council should have acted sooner.

*Response:* We are satisfied with the amount of time that the Council took to develop this action, and contend that the measures implemented by this final rule will provide meaningful protection to important forage species in the Mid-Atlantic. The Council identified the need to protect forage species as part of its strategic planning and visioning process in 2011, and initiated this action in 2014, shortly after receiving guidance about how to manage forage species from its SSC. Because this was the first management action to specifically manage forage species in the Atlantic Ocean, the Council conducted extensive outreach to solicit public input during the development of this action. This action represents proactive steps by the Council to protect previously unmanaged forage species and prevent the initiation or further development of commercial fisheries on these species as it collects information on the importance of these species to fisheries communities and the ecosystem.

*Comment 2:* One individual was concerned that the proposed measures would not become effective until 2020.

*Response:* The comment is incorrect; all measures approved in this final rule are effective on September 27, 2017. As noted above, the Atlantic chub mackerel measures will expire on December 31, 2020, three years after implementation, to incentivize the Council to develop long-term management measures to formally integrate this species into the

Atlantic Mackerel, Squid, and Butterfish FMP.

*Comment 3:* Two individuals were concerned that climate change, including ocean acidification, will destroy fish habitat and negatively impact forage fish, sea birds, and marine mammals, with one individual suggesting the Environmental Protection Agency (EPA) should protect our air and water.

*Response:* Recent NMFS studies recognize that certain species are more vulnerable than others to climate change and associated effects to habitat. While stock assessments and management measures can consider the impacts of climate change, NMFS is not authorized to regulate the sources of air and water pollution referenced in these comments. The EPA develops regulations and policies aimed at reducing air and water pollution.

*Comment 4:* One individual suggested that forage fish should be limited to processing as food, not fish meal or fish oil.

*Response:* Because the Council did not impose any restrictions on the use or processing of forage species in this action, NMFS does not have the authority to impose such restrictions through this final rule.

*Comment 5:* Seven individuals, along with 11,484 form letters from Pew, expressed general support for this action. Three individuals indicated that forage fish are a vitally important component to the ecology of our oceans through their role of energy transferors and as the primary food source for larger fish, marine mammals, and humans. A separate comment from Pew indicated that forage fish are the bedrock of coastal economies, jobs, recreation, and seafood, and that protecting them through this action is an important step toward ecosystem based fisheries management. The Audubon Society commented that seabirds depend on forage species, especially small, schooling fish that are protected by this amendment. They provided a list of 15 seabird species that rely upon forage fish for 20 percent or more of their diet. The 11,484 Pew form letters indicated that, due to reductions in the availability and catch rates of other stocks, vessels will target unmanaged species, which would negatively affect those species and predators of those species. Similarly, one individual indicated that this amendment would help prevent the commercial fishing industry from fishing down the food web.

*Response:* We agree that forage species are an integral part of the marine ecosystem, and that excessive catch of

forage species will have negative impacts not only on predators such as fish, sea birds, and marine mammals, but also on fishing communities that rely upon predators of forage species for important commercial and recreational fisheries. That is why the Council initiated this action as part of its efforts to integrate ecosystem approaches to fisheries management. We recognize that restrictions in targeted fisheries potentially could increase fishing effort on other unmanaged species, such as the forage species listed in this action. By preventing the creation of new or expansion of existing commercial fisheries on previously unmanaged forage species, this action minimizes the risk of fishing down the food web.

*Comment 6:* One individual recommended that we use caution when allowing additional fishing to occur on forage species until we know more about the impacts of fishing on these species. Another individual indicated that NMFS must achieve a sustainable balance between species regeneration and harvest of forage fish.

*Response:* One of the primary purposes of this action is to maintain recent catch levels until we can collect additional data on the catch and landings of these previously unmanaged forage species. The data collected through the vessel logbook and dealer reporting requirements implemented by this action will help the Council make more informed decisions in the future regarding the appropriate levels of catch for such species. Further, this action adopts a policy that requires use of an EFP and subsequent Council review before considering any new fisheries or expansion of existing fisheries for Mid-Atlantic forage species.

*Comment 7:* One individual was concerned that by managing these species, fishermen would be held responsible for declines in abundance. This individual suggested that there are no plans to examine how environmental factors affect forage species or predators, and that this action does not assess the impacts of factory ships on the ecosystem, only impacts of small boats.

*Response:* We disagree with this commenter. The EA prepared for this action includes a cumulative effects analysis (Section 7.6 of the EA), as required by the National Environmental Policy Act (NEPA) and the Council on Environmental Quality regulations. This analysis considers the impacts of non-fishing activities such as climate change, point and non-point source pollution, shipping, dredging, storm events, and other factors on the physical and biological dimensions of the environment. The impacts of these non-

fishing activities are considered in the development of all fishery management actions. Further, environmental factors along with mortality resulting from fishing activities are considered when developing a stock assessment and determining the appropriate levels of catch for managed species. Depending on the species, fishing may not be the primary source of mortality, and this will influence the measures necessary to sustain that species. This action will help collect data to help determine the scale of fishing mortality on these forage species should the Council determine that these species require conservation and management in the future. Finally, while the EA does not explicitly evaluate the impacts of “factory ships” on the ecosystem, Section 7 of the EA evaluates the impacts of fishery operations of all sizes of vessels that fish within Federal waters on all aspects of the marine environment, including target and non-target species, endangered species, marine mammals, and habitat.

*Comment 8:* One individual suggested that all fisheries management decisions must be guided by peer reviewed scientific analysis to drive rational decisions.

*Response:* Fishery management decisions must be based upon the best scientific information available, as required by National Standard 2 of the Magnuson-Stevens Act. The best available scientific information can take many forms and does not always take the form of peer reviewed analysis. All fishery measures are developed, analyzed, and reviewed by Council and NMFS staff, external scientists, academic researchers, industry representatives, and others with scientific expertise.

*Comment 9:* Seafreeze Ltd. expressed concern that measures were not based on a scientific threshold for determining whether a species is a forage species in this amendment. It noted that the Council did not use the SSC’s dietary threshold in its definition of forage species (forage species represent greater than five percent of an animal’s diet for more than five years), suggesting that a lack of a threshold or consistent diet data calls into question the purpose of this action.

*Response:* As noted above, the Council did not rely exclusively upon the SSC’s forage species criteria to inform its decision to include forage species for this action, although the SSC’s criteria did serve as the starting point for Council consideration. Section 4.2 of the EA prepared for this action notes that there were “no uniform quantitative metrics available to

compare the trophic level of a number of forage species, or to assess the number of trophic linkages for each species.” Instead, the Council determined how to best evaluate the SSC’s and other criteria used to define forage species. The Council used alternative dietary criteria due to the diversity of diet for many species. Specifically, the SSC’s dietary criteria would have reduced the list of forage species to only a few species, many of which are not found in Federal waters. As a result, any proposed measures to protect such a limited list of forage species would not likely have been effective or offer much benefit to managed species important to commercial and recreational fisheries managed by the Council. Accordingly, the Council used a lower threshold to be more inclusive of forage species in this action, while still prioritizing protection for species that had the greatest potential to support future large-scale commercial fisheries.

*Comment 10:* The Garden State Seafood Association (GSSA) was critical of the amendment’s purpose and goals, indicating that there is no biological benefit from the proposed measures. This group suggested that NMFS should delay the implementation of this final rule until measurable goals can be identified.

*Response:* We disagree that there is no biological benefit from this action. Although this action maintains existing catch levels for forage species, in the long-term, this action will help maintain sustainable populations of several forage species for various predators, including Council-managed predators, protected species predators, and seabirds. The purposes of this action are to prevent the expansion of existing and the development of future commercial fisheries for certain forage species while the Council collects the information it needs to assess the impacts to existing fisheries, fishing communities, and the marine ecosystem. The measures implemented by this action do exactly that. Because data have not been collected on the catch of these species, it is difficult to quantitatively assess the impacts of forage species on predators, the marine ecosystem, and communities at this time. Therefore, implementation of reporting requirements through this final rule will provide the information the Council and NMFS need to assess catch of these species and develop more effective measures in the future, as necessary.

*Comment 11:* Seafreeze Ltd. and Lund’s Fisheries Incorporated are concerned that state permitted vessels do not have similar restrictions on the

catch of forage species, with Lund's Fisheries suggesting that this creates two classes of fishermen and penalizes those with a Federal permit from selling forage species. Lund's Fisheries suggested that NMFS and the Council should encourage the Atlantic States Marine Fisheries Commission to take similar action to protect forage species in state waters.

*Response:* Neither the Council, nor NMFS has the authority to require states to implement similar measures to protect forage species. Because each state has a seat on the Council, and the Council has already expressed its interest in protecting forage species, it is incumbent upon each state to decide whether it should implement similar forage species measures within waters under their jurisdiction. We disagree that this penalizes Federal permit holders from selling catch of these species, as it implements possession limits that reflect 99 percent of trip-level commercial landings of forage species over the past 20 years. Therefore, based on recent fishing operations, vessels issued a Federal permit should not be negatively affected by these possession limits.

*Comment 12:* One individual suggested that this action violates NOAA Administrative Order (NAO) 216-6A because the Council did not examine whether this action would set a precedent for future action with significant effects or represent a decision in principle about future consideration. He also stated that the use of discretionary authority under section 303(b)(12) of the Magnuson-Stevens Act to manage chub mackerel sets a precedent regarding the regulation of commercially targeted species outside of a FMP and without adequate oversight. In contrast, Pew supports the use of such discretionary authority until the species can be formally integrated as a species within the Atlantic Mackerel, Squid, and Butterfish FMP.

*Response:* The commenter cites text related to the determination of significance of NOAA's actions as required by the NEPA from an outdated version of NAO 216-6A dated May 20, 1999. The new version of NAO 216-6A became effective April 22, 2016, and contains no such language. In fact, the new version authorizes the development of a companion manual to set policy and procedures for complying with NEPA. That companion manual became effective January 13, 2017, and contains the text referenced by the commenter, but in the context of evaluating the use of a categorical exclusion under extraordinary circumstances. Since the Council developed an EA in support of

this action, this policy guidance is not relevant to this action. The Council will evaluate the significance of any future action it may develop for chub mackerel as it develops measures for that particular action.

We disagree that the use of section 303(b)(12) of the Magnuson-Stevens Act to develop chub mackerel measures under this action sets a precedent that would allow commercial fishing to occur outside of a FMP and without oversight. Section 303(b) specifically authorizes the development of such discretionary measures as part of a FMP. Therefore, this section allows for increased management and oversight of commercial fisheries by the Council, not the opposite. We agree with Pew in that it represents a viable mechanism to proactively implement interim measures to manage this species while the Council develops the required provisions to formally manage chub mackerel as a stock in an FMP.

*Comment 13:* Two individuals recommended that this action should include river herring, with one citing the millions of taxpayer dollars spent to restore habitat and breeding streams that would be wasted if these species are not protected. He indicated that NMFS needs to collect more data and protect river herring in the ocean. Three individuals suggested that this action should also include Atlantic menhaden as a forage species.

*Response:* Because the Council did not consider managing river herring or Atlantic menhaden as forage species under this action, NMFS does not have the authority to add these species through this final rule. The Council has already considered ways to manage river herring as part of Amendment 14 to the Atlantic Mackerel, Squid, and Butterfish FMP and associated specifications since 2014. Specifically, the Council established a river herring and shad catch cap in the mackerel fishery and established reporting requirements to monitor such catch in the mackerel fishery. The Atlantic States Marine Fisheries Commission (ASMFC) already manages Atlantic menhaden because this species is predominantly found in nearshore waters and is prosecuted by state fisheries. The Council could consider management measures for these species and other species through a future action, as appropriate.

#### **Ecosystem Component Species**

*Comment 14:* One individual indicated that, until there is sufficient science on the population dynamics and trophic significance of all forage species originally listed (presumably by the SSC

or Fishery Management Action Team), none of the species should be omitted from this action. Another individual indicated that the Council should be precautionary and implement catch limits for all forage species.

*Response:* Section 4.2 of the EA describes the background for how the Council determined which forage species to include in this action. The Council did not intend to prohibit the harvest of all unmanaged forage species. Instead, the Council identified a list of prioritized forage species to minimize the burden of the proposed new regulations on existing managed fisheries. In selecting the taxa to include in this amendment, the Council prioritized some species due to their importance as prey for "socially and economically important species" and their perceived potential to become the target of large-scale commercial fisheries. The Council could add forage species through a future action as more information becomes available, or as needed to achieve conservation and management objectives.

*Comment 15:* Seafreeze Ltd. and the GSSA oppose the approval of halfbeaks, scaled sardine, Atlantic thread herring, and Spanish sardine as EC species in this action, because there is no link as forage or bycatch between these species and fisheries managed by the Council. They contend that none of these species have been found in NMFS observer data for trawls, gillnets, or hook gear resulting in landings of Council managed species; that they have not been found in the stomachs of Council managed species in NMFS surveys; and that they fail to meet all the criteria for listing as an EC species and the forage species criteria developed by the SSC.

*Response:* We disagree that these species fail to meet the criteria for listing as an EC species, as the amendment provides information that supports the determination that these species are eligible to be listed as EC species based on the criteria outlined in the National Standard Guidelines at § 600.305. The Council relied in part on the SSC's definition of forage species as well as other criteria in its proposed list of forage species to manage as EC species in this action. Section 6.1 of the EA identifies the rationale for the inclusion of each species in this action. While halfbeaks have not been found in the stomach contents of managed species in NMFS surveys, they were documented as forage for bluefish, a Council-managed species, in another source. Further, the Council notes that halfbeaks are often caught in Florida and are commonly used as bait in Mid-Atlantic recreational fisheries, making

them vulnerable to potential future commercial exploitation. There is sufficient evidence that other unmanaged herrings and sardines are consumed as forage for many Council-managed species, are often documented as bycatch in managed fisheries, and are potentially vulnerable to commercial exploitation due to market demand.

*Comment 16:* The GSSA, Seafreeze Ltd., and Lund's Fisheries Incorporated opposed the inclusion of bullet and frigate mackerel as EC species for the same reasons we highlighted in the proposed rule. However, Pew and Wild Oceans, along with 11,496 Pew form letters, supported the inclusion of these species, highlighting their importance to ecosystems and coastal communities who directly or indirectly depend upon the catch or use of these species. One individual disagreed with our assertion that the trophic level of these species is too high, suggesting that trophic linkages are truncated in pelagic ecosystems. Pew noted that bullet and frigate mackerel are vulnerable to commercial exploitation because they school in predictable areas, while Wild Oceans contended that protecting bullet and frigate could reduce predation on managed species by providing more prey for common predators. Supporters also noted that many significant keystone predators such as large pelagic species (tuna, billfish, swordfish, dolphinfish (dorado) and sharks) feed on these mackerel, and a failure to protect them could cause trophic cascading (e.g., effects on species higher or lower in the food chain as a result of changes in prey or predator abundance) and indirect and unpredictable effects (presumably reduced abundance) on large pelagic species.

*Response:* As noted above, we maintain our original contention that the best available information does not support the classification of bullet and frigate mackerel as forage species in this action and that they are not related to species managed by the Council. Public comments did not provide additional information that would change this determination. The SSC did not differentiate trophic structure criteria based on where organisms were found, and the commenter did not provide sufficient evidence to warrant such a differentiation. Although Wild Oceans asserts that these species are vulnerable to commercial exploitation because they school in predictable areas, Pew notes that these species are less vulnerable to commercial fishing, particularly trawl gear, because of their fast swimming speed. This, in conjunction with minimal commercial landings of these species over the past 20 years, suggests

that these species are not vulnerable to commercial exploitation at this time. While we acknowledge that bullet and frigate are prey for large pelagic species, available information does not confirm that bullet and frigate mackerel constitute a substantial component of the diet of large pelagic species, or that they are forage for managed species. Therefore, there is insufficient information in the amendment to conclude that failure to protect these species through this action would cause trophic cascading or negative impacts on managed species or large pelagic predators.

*Comment 17:* Pew asserts that a nexus between forage species and regulated species is not required by the Magnuson-Stevens Act, noting that the discretionary authority provided in section 303 can be used to conserve target and non-target species considering ecological factors that may affect fish populations. They also cite the National Standard 1 guidelines in highlighting that maintaining adequate forage may prevent overfishing and achieve optimum yield. Wild Oceans indicates that these Guidelines allow flexibility to achieve ecosystem goals, including those in the Council's ecosystem approach to fisheries management (EAFM) guidance document, and that failure to include these species is contrary to NMFS' ecosystem based fishery management (EBFM) policy.

*Response:* We agree that section 303 of the Magnuson-Stevens Act provides the Council with the discretion to implement measures for target and non-target species for ecosystem considerations. As noted in the scoping document for this action and Council meetings during the development of this action, the intent of this action was to maintain an adequate biomass of forage species to allow for abundant populations of Council-managed predators, as well as to integrate ecosystem considerations into the FMP. NMFS determined that forage species considered in this action must have an ecological or operational (bycatch) linkage with Council-managed species in order to maintain consistency with the Council's intent to maintain an adequate biomass of forage species to allow for abundant populations of Council-managed predators of the forage species. Although the description of the purpose and need for this action, as included in the EA, indicated that the Council was also integrating an ecosystem approach to management into this action, the Council did so by protecting forage species; this action was not intended to be a comprehensive

ecosystem management action. NMFS must evaluate this action within the context in which it was developed, and using the best available information, which, as noted above, is not sufficient to justify inclusion of bullet and frigate mackerel as EC species under this action.

We also agree that the National Standard 1 Guidelines allow the Council to consider forage and EC species when determining optimum yield and the greatest benefit to the nation. However, it is important to note that the National Standard 1 Guidelines apply to stocks in the fishery that the Council determines require conservation and management. By proposing to manage bullet and frigate mackerel as EC species, the Council has implicitly determined that such species do not require conservation and management measures at this time pursuant to the National Standard Guidelines at § 600.305(c)(5) and are, therefore, not stocks in the fishery. Accordingly, the National Standard 1 Guidelines do not apply to these species. That notwithstanding, if the Council believes that these species require conservation and management in the future, a small tuna FMP or a broader ecosystem based management action may be a more effective vehicle to manage these species than an amendment predicated on protecting forage for managed species. Finally, despite the disapproval of bullet and frigate mackerel as EC species in this action, we contend that the Council's use of discretionary authority to designate certain other previously unmanaged forage species as EC species and to implement measures to protect against the further exploitation of these species is consistent with both the Council's EAFM guidance document and the NMFS EBFM policy.

#### **Permitting and Reporting Requirements**

*Comment 18:* Pew, Lund's Fisheries Incorporated, and the GSSA support the use of existing permitting requirements for this action. They, along with one individual and the 11,484 respondents to the Pew form letter, also support the use of existing reporting requirements to collect additional data on these species. Another individual indicated that the proposed reporting requirements would not collect acceptable data, but did not suggest why. The Office of Management and Budget indicated that this action would have no effect on any current information collections.

*Response:* The existing permitting and reporting requirements are necessary to collect information to effectively monitor and manage the catch of forage

species. The permitting and reporting requirements allow us to identify which vessels are catching chub mackerel and Mid-Atlantic forage species, how much they are catching of each species or species group, where and when the catch occurs, and what gear is used to catch these species. This information could then be used to monitor catch against the chub mackerel annual landing limits, enforce possession limits, and provide information necessary to assess the status of the stock and develop potential future management measures, as necessary. Thus, this final rule implements the permitting and reporting requirements for Mid-Atlantic forage species.

#### Annual Landing and Possession Limits

*Comment 19:* One individual suggested that NMFS should stop all fishing for forage species, stating that, without limits, commercial vessels will harvest them until endangered and overfished. Respondents to the Pew form letter and another individual suggested that forage fish quotas should be set to prevent overfishing.

*Response:* We do not agree that it is necessary to stop all fishing for forage species or impose quotas for all species to prevent overfishing or prevent such species from becoming endangered. We do not know much about the status of these species. As noted in the response to the previous comment, the information collected through measures implemented by this final rule will: Provide the information the Council needs to effectively monitor the catch of these species; allow the Council and NMFS to evaluate the potential impacts of existing catch levels on existing fisheries, fishing communities, and the marine ecosystem; and allow the Council and NMFS to set appropriate future landing limits to prevent overfishing, as necessary.

*Comment 20:* One individual recommended that NMFS implement a 5.25 million-lb (2,381-mt) annual landing limit for chub mackerel because it reflects the historical fluctuation of the chub mackerel market, is more consistent with the market's overall direction, avoids implementing artificial constraints, allows equal access to the market, and facilitates competition in the market rather than consolidating control by a select group of large vessels. He notes that implementing the proposed 2.86 million lb (1,297 mt) limit artificially caps the market and could increase landing price to the disproportionate benefit of large vessels. Lund's Incorporated and the GSSA support the higher limit, stating there is no evidence that the higher limit would

harm the stock and that it would reduce discards until the SSC can set a reasonable biologically-based limit in a future action. They also suggest the ecosystem management approach should consider changing species distribution, including the increasing availability of a species like chub mackerel in setting landing limits. In contrast, Pew and another individual felt that the proposed limit is too high and that the limit should be set lower as a precaution because NMFS does not have adequate data about biological and ecological status of stock, what fishing level is sustainable, and the impacts of recent increased fishing.

*Response:* Although chub mackerel landings have fluctuated greatly since 1996, landings since 2013 are substantially higher than previous years. The Council considered several alternative annual landing limits for chub mackerel, including the average landing amount from 1996–2015 (900,127 lb (408 mt)), average landings from 2011–2015 (1.75 million lb (794 mt)), and the highest landings recorded in 2013 (5.25 million lb (2,381 mt)). Instead, the Council adopted a 2.86 million-lb (1,297-mt) annual landing limit to reflect more recent average landings between 2013–2015. This limit accounts for variations in resource availability and catch, and is higher than the five-year average landings, but lower than the highest landings recorded in 2013. This compromise is not only consistent with the purpose of this action to maintain existing catch levels, but also with the principles advocated by several commenters to mirror recent landings trends, reduce discards, and set a precautionary catch limit while the Council develops long-term measures in a subsequent action.

We disagree that the chub mackerel annual landing limit implemented by this final rule implements artificial constraints, prevents equal access to the resource or markets, or disproportionately benefits large vessels. Even without constraints, the landing price for chub mackerel has been highly variable and not necessarily correlated with landing amounts since 1996. The EA suggests that landings amounts and associated price is affected by several variables, including availability of chub mackerel and other species. Therefore, the Council and NMFS cannot determine how any one particular measure affects market prices at this time. All vessels of all sizes have equal access to available chub mackerel under this action. Section 8.11.4.3 of the EA describes the economic impact analysis required under the Regulatory Flexibility Act (RFA). That analysis

indicates that between 2006 and 2015, 63 small businesses and affiliated entities reported fishing revenues from forage species affected by this action. All of these entities had average annual sales during 2013–2015 that were less than \$11 million, which is the level of annual fishery revenue used to determine small entities under the RFA. Thus, all entities affected by this action are classified as small businesses. Further, this analysis concluded that all proposed measures, including the chub mackerel annual landing limit, would not place a substantial number of small entities at a significant competitive disadvantage to large entities.

*Comment 21:* Seafreeze Ltd., Lund's Fisheries Incorporated, and the GSSA support the 40,000-lb (18-mt) chub mackerel possession limit once the annual landing limit is reached. Pew indicated that the limit is not supported by the best available science or a methodology similar to the limit used to derive the possession limit for other EC species, suggesting that it should be lower to prevent a directed fishery. Another individual stated the possession limit is higher than annual chub mackerel landings before 2003, and suggested that it disproportionately benefits larger vessels. He recommended that if NMFS implements the 2.86 million-lb (1,297-mt) chub mackerel annual landing limit, NMFS should also implement the 10,000-lb (4.5-mt) possession limit because the annual limit and possession limit must be similarly restrictive to equitably restrict all fisheries regardless of size and better align with the amendment's purpose of preventing fishery expansion. He also noted that the lower possession limit reduces discards, but does not provide enough incentive to target the species.

*Response:* To be consistent with the methodology used by the Council to determine the possession limit for EC species, the Council would have had to adopt a much higher chub mackerel possession limit than the proposed 40,000-lb (18-mt) limit. The limit for EC species was based on the 99th percentile of dealer-reported landings of these species from 1997–2015. That limit was meant to maintain existing catch levels for those species. In contrast, as noted by Pew, the chub mackerel limit was intended to prevent directed fishing. Accordingly, using a similar methodology is not appropriate, as the trip limit should reduce incentives to target chub mackerel.

The Council chose a 40,000-lb (18-mt) limit because that is the capacity of a bait truck, and limiting landings to that amount reduces economic incentives to target chub mackerel, while allowing

vessels to land smaller, incidental amounts of chub mackerel to minimize discards. The Council considered a 10,000-lb (4.5-mt) possession limit based on average trip-level landings from 1996–2015, but that would likely result in higher discards due to larger volumes of chub mackerel caught by larger vessels in recent years. The possession limit selected is separate and distinct from the annual landings limit, and does not need to be proportional to have the desired effect of reducing incentives to target this species once the annual landing limit is caught. We recognize that the possession limit is higher than annual landings before 2003, but note that landings since 1996 have been highly variable, ranging from 479 lb (217 kg) to 5.25 million lb (2,381 mt). Contrary to what one commenter indicated, this possession limit would actually benefit smaller capacity vessels more than larger capacity vessels because it is less likely to constrain landings once the annual landing limit is reached. Section 5.2.3 of the EA states that there is a substantial range in landing amounts within the fishery, concluding that the amount of chub mackerel catch which is truly incidental is not well understood and is likely different for larger, faster vessels than for smaller, slower vessels.

*Comment 22:* Pew, Lund's Fisheries Incorporated, and the GSSA support the proposed 1,700-lb (771-kg) limit for EC species.

*Response:* This final rule implements this trip limit for approved EC species.

*Comment 23:* The Executive Director of the New England Fishery Management Council highlighted that existing regulations for the Northeast Multispecies FMP only allow the retention of certain species in exempted fisheries within the Southern New England Regulated Mesh Area, an area that overlaps with the proposed Mid-Atlantic Forage Species Management Unit. He suggested that the final rule clarify that the most restrictive possession limit would apply to vessels subject to the Northeast Multispecies FMP that are fishing within the Mid-Atlantic Forage Species Management Unit.

*Response:* We agree. This was an oversight, and we made the appropriate changes to the regulatory text at § 648.351(a) in this final rule.

#### Transit Measure

*Comment 24:* Seafreeze Ltd. supported the transit measure, but both Lund's Fisheries Incorporated and the GSSA opposed the measure, stating that it creates an unfair competitive situation by allowing harvesters from other

jurisdictions to be exempted from possession limits imposed on Mid-Atlantic harvesters.

*Response:* The transit measure would only apply to catch of Mid-Atlantic forage species outside of the Mid-Atlantic Forage Species Management Unit (Mid-Atlantic Federal waters), which is outside of the jurisdiction of the Mid-Atlantic Fishery Management Council. In addition, because transiting vessels must have their gear stowed when transiting the Management Unit, this measure is unlikely to negatively impact Mid-Atlantic forage species, managed species, or other predators. Further, this measure was developed mostly to address the targeting of chub mackerel within the Gulf of Mexico that are landed in Rhode Island. Since this action counts all chub mackerel landed in New England ports against the chub mackerel annual landing limit, impacts to chub mackerel are minimized. The Magnuson-Stevens Act requires the Council to manage a stock throughout its range. Therefore, when considering integrating chub mackerel into the Atlantic Mackerel, Squid, and Butterfish FMP in a future action under development, the Council will need to consider the species range as it develops measures for that action, including potentially reconsidering the need for this transiting provision.

#### Other Administrative Measures

*Comment 25:* Pew Charitable Trusts noted that the Mid-Atlantic Fishery Management Council manages some species to the Virginia/North Carolina border and others to the latitude of Cape Hatteras. Pew supported extending the Mid-Atlantic Forage Species Management Unit to Cape Hatteras to ensure there is no gap in the management of these species within the jurisdiction of the Mid-Atlantic Fishery Management Council.

*Response:* We agree and have implemented the Management Unit as proposed.

*Comment 26:* The GSSA and Lund's Fisheries Incorporated supported the ability to revise landing and possession limits through a future framework adjustment action.

*Response:* The framework measures have been implemented through this action.

*Comment 27:* The GSSA, Lund's Fisheries Incorporated, and the Pew Charitable Trusts support the use of an EFP to support the development of any new or expanded fishery for forage species. Pew indicated that the Council should emulate the more formal EFP review process adopted by the Pacific Fisheries Management Council as part

of its Comprehensive Ecosystem Based Amendment 1 and documented in its Council Operating Procedure 24 before opening or expanding any fishery. Pew also recommended that NMFS should prohibit new or expanded fishing on EC species until full Federal management is in place that protects their role as prey in the ecosystem, and that the Council should evaluate whether a species is in need of conservation and management before allowing new or expanded fisheries for these species.

*Response:* The Council documented its intent to require an EFP and subsequent review through the adoption of this action. Existing regulations at § 648.12 require the Regional Administrator to consult with the Council's Executive Director before approving any exemptions to the Council's FMPs. The regulations revised by this action have already expanded that consultation requirement to specifically include exemptions that would contribute to the development of a new fishery or the expansion of existing fisheries for Mid-Atlantic forage species and chub mackerel. Therefore, the Council has already developed a protocol similar to the Pacific Council's Operating Procedure 24.

At § 648.14(w), this action implements a prohibition against vessels possessing more Mid-Atlantic Forage Species and chub mackerel than authorized in § 648.351. As a result, no additional prohibition is needed to prevent the expansion of existing fisheries or the development of new fisheries for these species. In addition, fisheries for Mid-Atlantic Forage Species cannot develop or expand without a future Council or NMFS action, which must be consistent with the Magnuson-Stevens Act and other applicable law. Thus, both the Council and NMFS will evaluate whether a stock requires conservation and management, and NMFS will ensure that all measures developed for those stocks in the future, including measures to achieve optimum yield, are consistent with applicable law, before approving any new or expanded fisheries for EC species.

*Comment 28:* Pew Charitable Trusts recommended that NMFS update the list of authorized fisheries and gear in § 600.725(v) to ensure that no fishery on unmanaged forage species emerges without the knowledge of NMFS and the Council.

*Response:* As noted in Section 5.3.2.2 of the EA for this action, the list of authorized fisheries and gear at § 600.725(v) already includes two general categories of commercial fisheries for which the legal harvest of unmanaged forage species would be

allowed without advanced notification to the Council. The Council considered modifying this list as part of this action, but instead implemented more discrete possession limits for forage species. As a result, NMFS cannot unilaterally implement such changes through this final rule. It is likely that any fishery for other unmanaged forage species would be detected through existing data collections such as the vessel logbook or dealer reports. For example, landings of several species of previously unmanaged forage species included in this action (anchovies, argentines, sand lances, silversides, chub mackerel, and frigate mackerel) were recorded in Federal dealer reports. This prompted the Council to develop appropriate management measures through this and the follow-on chub mackerel amendment. Similar action can be taken in the future for other species, as appropriate.

### Impact Analysis

*Comment 29:* One individual indicated that the negative socioeconomic impacts of this action will be offset by the positive socioeconomic impacts of maintaining healthy populations of forage species. He also noted that the amendment should consider the recreational and professional diving communities in the socioeconomic impact analysis, as a lack of forage species could negatively affect seal and predator populations, which are important drivers of demand for diving and spearfishing trips. The comment included a statement from another individual who estimated that dive shops in the Greater Boston Area cater to up to 1,500 divers each year and have yearly revenues of \$3–4 million.

*Response:* We agree that the benefits of maintaining recent catch levels of certain forage species through measures implemented by this action outweigh the potential costs associated with annual landing limits and possession limits. The EA prepared for this action included a description of the affected environment in Section 6, and an evaluation of the impacts of the proposed measures on components of the affected environment, including marine predators such as fish species, marine mammals, and fishing communities, in Section 7. The socioeconomic impact analysis focused on commercial and recreational fishery participants because they are the entities most likely to be affected by this action. That analysis did not evaluate impacts to diving operations because diving operations are only indirectly affected by this action and are not subject to these measures. As a result,

the Regulatory Flexibility Act does not require consideration of the impacts to non-regulated entities such as the diving industry. However, this action should provide benefits to the diving community similar to the benefits that would accrue to the recreational fishery in that it will protect forage species from further commercial exploitation, which will help maintain predator and seal populations important to the spearfishing and diving communities.

### Changes From the Proposed Rule

We have made several changes to the proposed regulations, including changes as a result of public comment and our decision to disapprove the inclusion of bullet and frigate mackerel as EC species. Some of these changes are administrative in nature, clarify the new or existing management measures, or correct inadvertent omissions in the proposed rule. All of these changes are consistent with section 305(d) of the Magnuson-Stevens Act (16 U.S.C. 1855(d)), which provides that the Secretary of Commerce may promulgate regulations necessary to ensure that amendments to an FMP are carried out in accordance with the FMP and the Magnuson-Stevens Act. These changes are listed below in the order that they appear in the regulations.

In this final rule's amendments to § 648.2, paragraph (a)(14) is renumbered as (a)(12), and paragraph (a)(15) is renumbered as (a)(13), to reflect the disapproval of the inclusion of bullet and frigate mackerel as Mid-Atlantic forage species in this final rule.

The regulations at §§ 648.4(a)(15), 648.5(a)(2), 648.6(a)(1), 648.7(a)(1) and (b)(1)(i), and 648.351(d) were revised by adding language specifying that the vessel permit, operator permit, dealer permit, reporting requirements, and transiting provision for vessels fishing for and possessing Atlantic chub mackerel and dealers purchasing chub mackerel are effective through December 31, 2020, as intended.

In § 648.351(a), the phrase "Unless otherwise prohibited under § 648.80," was added to the beginning of this paragraph to reference the possession restrictions of Northeast multispecies exempted fisheries. As noted above in Comment 23, the Executive Director of the New England Fishery Management Council indicated that the proposed possession limits for Mid-Atlantic forage species would inadvertently allow a vessel to possess species that are not explicitly authorized for exempted fisheries implemented under the Northeast Multispecies FMP.

### Classification

The Administrator, Greater Atlantic Region, NMFS, determined that the Mid-Atlantic Unmanaged Forage Omnibus Amendment is necessary for the conservation and management of the fisheries managed by the Mid-Atlantic Fishery Management Council and that it is consistent with the Magnuson-Stevens Fishery Conservation and Management Act and other applicable laws.

This final rule has been determined to be not significant for purposes of Executive Order 12866. This rule is not an E.O. 13771 regulatory action because this rule is not significant under E.O. 12866.

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration during the proposed rule stage that this action would not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the proposed rule and is not repeated here. NMFS received two comments regarding the socioeconomic impacts of this action (see Comments 20 and 29 above). In Comment 20, the commenter suggested that this action would artificially cap the market that could disproportionately benefit large vessels. However, as noted above, because all entities affected by this action are small businesses, this action could not place a substantial number of small entities at a significant competitive disadvantage to large entities. Comment 20 pertained to the diving community, a group that is not subject to the regulations under this action. Accordingly, no comments were received that would change the certification that this action will not have a significant economic impact on a substantial number of small entities regarding this certification. As a result, a regulatory flexibility analysis was not required and none was prepared.

This final rule contains a collection-of-information requirement subject to the Paperwork Reduction Act (PRA) and which has been approved by the Office of Management and Budget (OMB) under the OMB control numbers listed below. Public reporting burden for these collections of information, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, are estimated to average, as follows:

1. Initial Federal vessel permit application, OMB# 0648–0202, (45 minutes/response);

2. Initial Federal dealer permit application, OMB# 0648–0202, (15 minutes/response);

3. Initial Federal operator permit application, OMB# 0648–0202, (60 minutes/response);

4. Vessel logbook report of catch by species, OMB# 0648–0212, (5 minutes/response); and

5. Dealer report of landings by species, OMB# 0648–0229, (4 minutes/response).

Send comments on these or any other aspects of the collection of information to the Greater Atlantic Regional Fisheries Office at the ADDRESSES above, and email to *OIRA\_Submission@omb.eop.gov*, or fax to (202) 395–5806. Notwithstanding any other provision of the law, no person is required to respond to, and no person shall be subject to penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB control number.

#### List of Subjects in 50 CFR Part 648

Fisheries, Fishing, Recordkeeping and reporting requirements.

Dated: August 21, 2017.

**Samuel D. Rauch III,**

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 648 is amended as follows:

#### PART 648—FISHERIES OF THE NORTHEASTERN UNITED STATES

■ 1. The authority citation for part 648 continues to read as follows:

**Authority:** 16 U.S.C. 1801 *et seq.*

■ 2. In § 648.2, add definitions for “Atlantic chub mackerel” and “Mid-Atlantic forage species” in alphabetical order to read as follows:

#### § 648.2 Definitions.

\* \* \* \* \*

*Atlantic chub mackerel* means *Scomber colias*.

\* \* \* \* \*

*Mid-Atlantic forage species* means the following species and species groups:

(1) Anchovies (family Engraulidae), including but not limited to the following species:  
 (i) Striped anchovy-*Anchoa hepsetus*.  
 (ii) Dusky anchovy-*Anchoa lyolepis*.  
 (iii) Bay anchovy-*Anchoa mitchilli*.  
 (iv) Silver anchovy-*Engraulis eurystole*.

(2) Argentines (family Argentinidae), including but not limited to the following species:

(i) Striated argentine-*Argentina striata*.

(ii) Pygmy argentine-*Glossanodon pygmaeus*.

(3) Greeneyes (family Chlorophthalmidae), including but not limited to the following species:

(i) Shortnose greeneye-*Chlorophthalmus agassizi*.

(ii) Longnose greeneye-*Parasudis triculenta*.

(4) Halfbeaks (family Hemiramphidae), including but not limited to the following species:

(i) Flying halfbeak-*Euleptorhamphus velox*.

(ii) Balao-*Hemiramphus balao*.

(iii) Ballyhoo-*Hemiramphus brasiliensis*.

(iv) False silverstripe halfbeak/American halfbeak/Meek’s halfbeak-*Hyporhamphus meeki*.

(5) Herrings and Sardines (family Clupeidae). With the exception of other herring and sardine species managed under this part, including American shad, Atlantic herring, blueback herring, hickory shad, and river herring/alewife, as defined in this section, the following herring and sardine species are Mid-Atlantic forage species:

(i) Round herring-*Etrumeus teres*.

(ii) Scaled sardine-*Harengula jaguana*.

(iii) Atlantic thread herring-*Opisthonema oglinum*.

(iv) Spanish sardine-*Sardinella aurita*.

(6) Lanternfishes (family Myctophidae), including but not limited to the following species:

(i) Horned lanternfish-*Ceratoscopelus maderensis*.

(ii) Dumril’s headlightfish-*Diaphus dumerilii*.

(iii) Crocodile lanternfish-*Lampanyctus crocodilus*.

(iv) Doflein’s false headlightfish-*Lobianchia dofleini*.

(v) Spotted lanternfish-*Myctophum punctatum*.

(7) Pearlsides (family Sternoptychidae), including but not limited to the following species:

(i) Atlantic silver hatchetfish-*Argyropelecus aculeatus*.

(ii) Muller’s pearlside-*Maurolicus muelleri*.

(iii) Weizman’s pearlside-*Maurolicus weitzmani*.

(iv) Slope hatchetfish-*Polyipnus clarus*.

(8) Sand lances (family Ammodytidae), including but not limited to the following species:

(i) American/inshore sand lance-*Ammodytes americanus*.

(ii) Northern/offshore sand lance-*Ammodytes dubius*.

(9) Silversides (family Atherinopsidae), including but not limited to the following species:

(i) Rough silverside-*Membras martinica*.

(ii) Inland silverside-*Menidia beryllina*.

(iii) Atlantic silverside-*Menidia menidia*.

(10) Cusk-eels (order Ophidiiformes), including but not limited to the following species:

(i) Chain pearlfish-*Echiodon dawsoni*.

(ii) Fawn cusk-eel-*Lepophidium profundorum*.

(iii) Striped cusk-eel-*Ophidion marginatum*.

(11) Atlantic saury-*Scomberesox saurus*.

(12) Pelagic mollusks and cephalopods, excluding sharp-tail shortfin squid (*Illex oxygonius*), but including the following pelagic mollusc species:

(i) Neon flying squid-*Ommastrephes bartramii*.

(ii) European flying squid-*Todarodes sagittatus*.

(iii) Atlantic brief squid-*Lolliguncula brevis*.

(iv) Bobtail squids (family Sepiolidae), including but not limited to the following species:

(A) Odd bobtail squid-*Heteroteuthis dispar*.

(B) Big fin bobtail squid-*Rossia megaptera*.

(C) Warty bobtail squid-*Rossia palpebrosa*.

(D) Lesser bobtail squid-*Semirossia tenera*.

(E) Butterfly bobtail squid-*Stoloteuthis leucoptera*.

(v) Sea angels and sea butterflies (orders Gymnosomata and Thecosomata).

(vi) Tuberculate pelagic octopus-*Ocythoe tuberculata*.

(13) Species under one inch as adults, including but not limited to the following species groups:

(i) Copepods (subclass Copepoda).

(ii) Krill (order Euphausiacea).

(iii) Amphipods (order Amphipoda).

(iv) Ostracods (class Ostracoda).

(v) Isopods (order Isopoda).

(vi) Mysid shrimp (order Mysidacea).

\* \* \* \* \*

■ 3. In § 648.4, add paragraph (a)(15) to read as follows:

#### § 648.4 Vessel permits.

(a) \* \* \*

(15) *Mid-Atlantic forage species and Atlantic chub mackerel*. Any commercial fishing vessel must have been issued and have on board a valid commercial vessel permit issued in

accordance with this paragraph (a)(15) to fish for, possess, transport, sell, or land Mid-Atlantic forage species or Atlantic chub mackerel in or from the EEZ portion of the Mid-Atlantic Forage Species Management Unit, as defined at § 648.351(c). The vessel permit requirements specified in this paragraph (a)(15) for a commercial fishing vessel fishing for, possessing, transporting, selling, or landing Atlantic chub mackerel are effective through December 31, 2020. A vessel that fishes for such species exclusively in state waters is not required to be issued a Federal permit.

\* \* \* \* \*

■ 4. In § 648.5, revise paragraph (a) to read as follows:

§ 648.5 Operator permits.

(a) General. (1) Any operator of a vessel issued a permit, carrier permit, or processing permit for, and that fishes for or possesses, the species listed in paragraph (a)(2) of this section, must have been issued, and carry on board, a valid operator permit for these species. An operator's permit issued pursuant to part 622 or part 697 of this chapter, satisfies the permitting requirement of this section. This requirement does not apply to operators of recreational vessels.

(2) Following are the applicable species: Atlantic sea scallops, NE multispecies, spiny dogfish, monkfish, Atlantic herring, Atlantic surfclam, ocean quahog, Atlantic mackerel, squid, butterfly, scup, black sea bass, or Atlantic bluefish, harvested in or from the EEZ; tilefish harvested in or from the EEZ portion of the Tilefish Management Unit; skates harvested in or from the EEZ portion of the Skate Management Unit; Atlantic deep-sea red crab harvested in or from the EEZ portion of the Red Crab Management Unit; or Atlantic chub mackerel and Mid-Atlantic forage species, as defined at § 648.2, harvested in or from the EEZ portion of the Mid-Atlantic Forage Species Management Unit, as defined at § 648.351(c). The operator permit requirements specified in this paragraph (a)(2) for an operator of a vessel fishing for and possessing Atlantic chub mackerel are effective through December 31, 2020.

\* \* \* \* \*

■ 5. In § 648.6, revise paragraph (a)(1) to read as follows:

§ 648.6 Dealer/processor permits.

(a) \* \* \*

(1) All dealers of NE multispecies, monkfish, skates, Atlantic herring, Atlantic sea scallop, Atlantic deep-sea

red crab, spiny dogfish, summer flounder, Atlantic surfclam, ocean quahog, Atlantic mackerel, squid, butterfly, scup, bluefish, tilefish, and black sea bass; Atlantic surfclam and ocean quahog processors; Atlantic hagfish dealers and/or processors, and Atlantic herring processors or dealers, as described in § 648.2; must have been issued under this section, and have in their possession, a valid permit or permits for these species. A dealer of Atlantic chub mackerel or Mid-Atlantic forage species, as defined in § 648.2, harvested in or from the EEZ portion of the Mid-Atlantic Forage Species Management Unit, as defined at § 648.351(c), must have been issued and have in their possession, a valid dealer permit for any species issued in accordance with this paragraph. The dealer permit requirements specified in this paragraph (a)(1) for dealers purchasing Atlantic chub mackerel are effective through December 31, 2020.

\* \* \* \* \*

■ 6. In § 648.7, revise paragraphs (a)(1) and (b)(1)(i) to read as follows:

§ 648.7 Recordkeeping and reporting requirements.

(a)(1) Detailed report. Federally permitted dealers, and any individual acting in the capacity of a dealer, must submit to the Regional Administrator or to the official designee a detailed report of all fish purchased or received for a commercial purpose, other than solely for transport on land, within the time period specified in paragraph (f) of this section, by one of the available electronic reporting mechanisms approved by NMFS, unless otherwise directed by the Regional Administrator. The dealer reporting requirements specified in this paragraph (a)(1) for dealers purchasing or receiving for a commercial purpose Atlantic chub mackerel are effective through December 31, 2020. The following information, and any other information required by the Regional Administrator, must be provided in each report:

\* \* \* \* \*

- (b) \* \* \*
(1) \* \* \*

(i) The owner or operator of any vessel issued a valid permit or eligible to renew a limited access permit under this part must maintain on board the vessel, and submit, an accurate fishing log report for each fishing trip, regardless of species fished for or taken, on forms supplied by or approved by the Regional Administrator. The reporting requirements specified in this paragraph (b)(1)(i) for an owner or operator of a vessels fishing for,

possessing, or landing Atlantic chub mackerel are effective through December 31, 2020. If authorized in writing by the Regional Administrator, a vessel owner or operator may submit reports electronically, for example by using a VMS or other media. With the exception of those vessel owners or operators fishing under a surfclam or ocean quahog permit, at least the following information and any other information required by the Regional Administrator must be provided: Vessel name; USCG documentation number (or state registration number, if undocumented); permit number; date/time sailed; date/time landed; trip type; number of crew; number of anglers (if a charter or party boat); gear fished; quantity and size of gear; mesh/ring size; chart area fished; average depth; latitude/longitude (or loran station and bearings); total hauls per area fished; average tow time duration; hail weight, in pounds (or count of individual fish, if a party or charter vessel), by species, of all species, or parts of species, such as monkfish livers, landed or discarded; and, in the case of skate discards, "small" (i.e., less than 23 inches (58.42 cm), total length) or "large" (i.e., 23 inches (58.42 cm) or greater, total length) skates; dealer permit number; dealer name; date sold, port and state landed; and vessel operator's name, signature, and operator's permit number (if applicable).

\* \* \* \* \*

■ 7. In § 648.12, revise the introductory text to read as follows:

§ 648.12 Experimental fishing.

The Regional Administrator may exempt any person or vessel from the requirements of subparts A (General provisions), B (Atlantic mackerel, squid, and butterfly), D (Atlantic sea scallop), E (Atlantic surfclam and ocean quahog), F (NE multispecies and monkfish), G (summer flounder), H (scup), I (black sea bass), J (Atlantic bluefish), K (Atlantic herring), L (spiny dogfish), M (Atlantic deep-sea red crab), N (tilefish), O (skates), and P (Mid-Atlantic forage species and Atlantic chub mackerel) of this part for the conduct of experimental fishing beneficial to the management of the resources or fishery managed under that subpart. The Regional Administrator shall consult with the Executive Director of the MAFMC before approving any exemptions for the Atlantic mackerel, squid, butterfly, summer flounder, scup, black sea bass, spiny dogfish, bluefish, and tilefish fisheries, including exemptions for experimental fishing contributing to the development of new or expansion of

existing fisheries for Mid-Atlantic forage species and Atlantic chub mackerel.

\* \* \* \* \*

■ 8. In § 648.14, add paragraph (w) to read as follows:

**§ 648.14 Prohibitions.**

\* \* \* \* \*

(w) *Mid-Atlantic forage species and Atlantic chub mackerel.* It is unlawful for any person owning or operating a vessel issued a valid commercial permit under this part to do any of the following:

(1) Fish for, possess, transfer, receive, or land; or attempt to fish for, possess, transfer, receive, or land; more than 1,700 lb (771.11 kg) of all Mid-Atlantic forage species combined per trip in or from the Mid-Atlantic Forage Species Management Unit, as defined at § 648.351(c). A vessel not issued a commercial permit in accordance with § 648.4 that fished exclusively in state waters or a vessel that fished Federal waters outside of the Mid-Atlantic Forage Species Management Unit that is transiting the area with gear that is stowed and not available for immediate use is exempt from this prohibition.

(2) Fish for, possess, transfer, receive, or land; or attempt to fish for, possess, transfer, receive, or land; more than 40,000 lb (18.14 mt) of Atlantic chub mackerel per trip in or from the Mid-Atlantic Forage Species Management Unit, as defined at § 648.351(c), after the annual Atlantic chub mackerel landing limit has been harvested and notice has been provided to the public consistent with the Administrative Procedure Act. A vessel not issued a commercial permit in accordance with § 648.4 that fished exclusively in state waters or a vessel that fished in Federal waters outside of the Mid-Atlantic Forage Species Management Unit that is transiting the area with gear that is stowed and not available for immediate use is exempt from this prohibition.

■ 9. Add subpart P to read as follows:

**Subpart P—Mid-Atlantic Forage Species and Atlantic Chub Mackerel**

Sec.

648.350 Mid-Atlantic forage species and Atlantic chub mackerel annual landing limits.

648.351 Mid-Atlantic forage species and Atlantic chub mackerel possession limits.

648.352 Mid-Atlantic forage species and Atlantic chub mackerel framework measures.

**§ 648.350 Mid-Atlantic forage species and Atlantic chub mackerel annual landing limits.**

(a) *Mid-Atlantic forage species.* There is no annual landing limit for Mid-

Atlantic forage species, as defined at § 648.2.

(b) *Atlantic chub mackerel.* Effective through December 31, 2020, the annual landings limit for Atlantic chub mackerel is set at 2.86 million lb (1,297 mt). All landings of Atlantic chub mackerel by vessels issued a Federal commercial permit in accordance with § 648.4 in ports from Maine through North Carolina shall count against the annual landings limit. NMFS shall close the directed fishery for Atlantic chub mackerel in the EEZ portion of the Mid-Atlantic Forage Species Management Unit in a manner consistent with the Administrative Procedure Act when the Regional Administrator determines that 100 percent of the Atlantic chub mackerel annual landings limit has been harvested. Following closure of the directed Atlantic chub mackerel fishery, a vessel must adhere to the possession limit specified in § 648.351(b).

**§ 648.351 Mid-Atlantic forage species and Atlantic chub mackerel possession limits.**

(a) *Mid-Atlantic forage species.* Unless otherwise prohibited in § 648.80, a vessel issued a valid commercial permit in accordance with § 648.4 may fish for, possess, and land up to 1,700 lb (771.11 kg) of all Mid-Atlantic forage species combined per trip in or from the EEZ portion of the Mid-Atlantic Forage Species Management Unit, as defined in paragraph (c) of this section. A vessel not issued a permit in accordance with § 648.4 that is fishing exclusively in state waters is exempt from the possession limits specified in this section.

(b) *Atlantic chub mackerel.* Effective through December 31, 2020, a vessel issued a valid commercial permit in accordance with § 648.4 may fish for, possess, and land an unlimited amount of Atlantic chub mackerel from the Mid-Atlantic Forage Species Management Unit, as defined in paragraph (c) of this section, provided the Atlantic chub mackerel annual landing limit has not been harvested. Once the Atlantic chub mackerel annual landing limit has been harvested, as specified in § 648.350, a vessel may fish for, possess, and land up to 40,000 lb (18.14 mt) of Atlantic chub mackerel per trip in or from the Mid-Atlantic Forage Species Management Unit for the remainder of the fishing year (until December 31). A vessel not issued a permit in accordance with § 648.4 that is fishing exclusively in state waters is exempt from the possession limits specified in this section.

(c) *Mid-Atlantic Forage Species Management Unit.* The Mid-Atlantic Forage Species Management Unit is the

area of the Atlantic Ocean that is bounded on the southeast by the outer limit of the U.S. EEZ; bounded on the south by 35°15.3' N. lat. (the approximate latitude of Cape Hatteras, NC); bounded on the west and north by the coastline of the United States; and bounded on the northeast by the following points, connected in the order listed by straight lines:

Point	Latitude	Longitude
1	40°59.32' N.	73°39.62' W.
2	40°59.02' N.	73°39.41' W.
3	40°57.05' N.	73°36.78' W.
4	40°57.87' N.	73°32.85' W.
5	40°59.78' N.	73°23.70' W.
6	41°1.57' N.	73°15.00' W.
7	41°3.40' N.	73°6.10' W.
8	41°4.65' N.	73°0.00' W.
9	41°6.67' N.	72°50.00' W.
10	41°8.69' N.	72°40.00' W.
11	41°10.79' N.	72°29.45' W.
12	41°12.22' N.	72°22.25' W.
13	41°13.57' N.	72°15.38' W.
14	41°14.94' N.	72°8.35' W.
15	41°15.52' N.	72°5.41' W.
16	41°17.43' N.	72°1.18' W.
17	41°18.62' N.	71°55.80' W.
18	41°18.27' N.	71°54.47' W.
19	41°10.31' N.	71°46.44' W.
20	41°2.35' N.	71°38.43' W.
21	40°54.37' N.	71°30.45' W.
22	40°46.39' N.	71°22.51' W.
23	40°38.39' N.	71°14.60' W.
24	40°30.39' N.	71°6.72' W.
25	40°22.38' N.	70°58.80' W.
26	40°14.36' N.	70°51.05' W.
27	40°6.33' N.	70°43.27' W.
28	39°58.29' N.	70°35.51' W.
29	39°50.24' N.	70°27.78' W.
30	39°42.18' N.	70°20.09' W.
31	39°34.11' N.	70°12.42' W.
32	39°26.04' N.	70°4.78' W.
33	39°17.96' N.	69°57.18' W.
34	39°9.86' N.	69°49.6' W.
35	39°1.77' N.	69°42.05' W.
36	38°53.66' N.	69°34.53' W.
37	38°45.54' N.	69°27.03' W.
38	38°37.42' N.	69°19.57' W.
39	38°29.29' N.	69°12.13' W.
40	38°21.15' N.	69°4.73' W.
41	38°13.00' N.	68°57.35' W.
42	38°4.84' N.	68°49.99' W.
43*	38°2.21' N.	68°47.62' W.

\* Point 43 falls on the U.S. EEZ.

(d) *Transiting.* Any vessel issued a valid permit in accordance with § 648.4 may transit the Mid-Atlantic Forage Species Management Unit, as defined in paragraph (c) of this section, with an amount of Mid-Atlantic forage species or Atlantic chub mackerel on board that exceeds the possession limits specified in paragraphs (a) and (b) of this section, respectively, to land in a port in a state that is outside of the Mid-Atlantic Forage Species Management Unit, provided that those species were harvested outside of the Mid-Atlantic Forage Species Management Unit and

that all gear is stowed and not available for immediate use as defined in § 648.2. The transitting provisions specified in this paragraph (d) for a vessel possessing Atlantic chub mackerel are effective through December 31, 2020.

**§ 648.352 Mid-Atlantic forage species and Atlantic chub mackerel framework measures.**

(a) *General.* The MAFMC may, at any time, initiate action to add or revise management measures if it finds that action is necessary to meet or be consistent with the goals and objectives of the Atlantic Mackerel, Squid, and Butterfish FMP; the Atlantic Surfclam and Ocean Quahog FMP; the Summer Flounder, Scup, and Black Sea Bass

FMP; the Atlantic Bluefish FMP; the Spiny Dogfish FMP; and Tilefish FMPs.

(b) *Adjustment process.* The MAFMC shall develop and analyze appropriate management actions over the span of at least two MAFMC meetings. The MAFMC must provide the public with advance notice of the availability of the recommendation(s), appropriate justification(s) and economic and biological analyses, and the opportunity to comment on the proposed adjustment(s) at its first meeting, prior to its second meeting, and at its second meeting. The MAFMC's recommendations on adjustments or additions to management measures must come from one or more of the

following categories: The list of Mid-Atlantic forage species, possession limits, annual landing limits, and any other measure currently included in the applicable FMPs specified in paragraph (a) of this section. Issues that require significant departures from previously contemplated measures or that are otherwise introducing new concepts may require an amendment of the FMPs instead of a framework adjustment.

(c) *MAFMC recommendation.* See § 648.110(a)(2).

(d) *NMFS action.* See § 648.110(a)(3).

(e) *Emergency actions.* See § 648.110(a)(4).

[FR Doc. 2017-18034 Filed 8-25-17; 8:45 am]

**BILLING CODE 3510-22-P**

# Proposed Rules

Federal Register

Vol. 82, No. 165

Monday, August 28, 2017

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2017-0806; Product Identifier 2017-NM-064-AD]

RIN 2120-AA64

#### Airworthiness Directives; The Boeing Company Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 787-8 and 787-9 airplanes. This proposed AD was prompted by a flight test report indicating that the crew oxygen masks in the flight deck did not deploy correctly. This proposed AD would require an inspection to determine whether any crew oxygen mask having a certain part number is installed at four locations in the flight deck, and replacing affected crew oxygen masks. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by October 12, 2017.

**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 <http://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 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 referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0806.

#### Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0806; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Susan L. Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA; phone: 425-917-6457; fax: 425-917-6590; email: [susan.l.monroe@faa.gov](mailto:susan.l.monroe@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

We invite 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-2017-0806; Product Identifier 2017-NM-064-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each

substantive verbal contact we receive about this proposed AD.

#### Discussion

We have received a Model 787-8 flight test report indicating that the crew oxygen masks in the flight deck did not deploy correctly. When the crew oxygen masks were removed from the stowage boxes, the harnesses were stuck in the face masks. The harness could get caught in the oronasal mask or goggles and increase the time needed to don the crew oxygen mask. Removing the harness from the face mask required using two hands and exceeded the requirement for the flight crew to don the oxygen mask in 5 seconds. Model 787-8 and 787-9 airplanes use the same design for the crew oxygen masks. This mask removal condition, if not corrected, could lead to flight crew hypoxia and the loss of useful consciousness, possibly resulting in loss of control of the aircraft.

#### Related Service Information Under 14 CFR Part 51

We reviewed Boeing Service Bulletin B787-81205-SB350007-00, Issue 001, dated May 9, 2017. The service information describes procedures for replacing the crew oxygen masks at four locations in the flight deck. 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

We are proposing this AD because we 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 designs.

#### Proposed AD Requirements

This proposed AD would require accomplishment of the actions identified as "RC" (required for compliance) in the Accomplishment Instructions of Boeing Service Bulletin B787-81205-SB350007-00, Issue 001, dated May 9, 2017, described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for

and locating Docket No. FAA-2017-0806.

For airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, this proposed AD requires an inspection to determine whether any crew oxygen mask having part number

MLD20-626-1 is installed, and replacement if necessary.

**Differences Between This Proposed AD and the Service Information**

The proposed AD applicability differs from the service information due to rotability of parts. Because the affected parts are rotatable parts, we have determined that these parts could later be installed on airplanes that were

initially delivered with acceptable parts, thereby subjecting those airplanes to the unsafe condition. We have coordinated this difference with Boeing.

**Costs of Compliance**

We estimate that this proposed AD affects 57 airplanes of U.S. registry. We estimate 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 .....	1 work-hour × \$85 per hour = \$85.	\$0 .....	\$85 .....	\$4,845
Replacement .....	Up to 4 work-hours × \$85 per hour = \$340.	Up to \$36,800 .....	Up to \$37,140 .....	Up to \$2,116,980

**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.

We are 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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

**Regulatory Findings**

We 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) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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 (AD):

**The Boeing Company:** Docket No. FAA-2017-0806; Product Identifier 2017-NM-064-AD.

**(a) Comments Due Date**

We must receive comments by October 12, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

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

**(d) Subject**

Air Transport Association (ATA) of America Code 35, Oxygen.

**(e) Unsafe Condition**

This AD was prompted by a flight test report indicating that the crew oxygen masks in the flight deck did not deploy correctly. We are issuing this AD to prevent the oxygen mask harness from getting caught in the oronasal mask or goggles, which may lead to flight crew hypoxia and the loss of useful consciousness, possibly resulting in loss of control of the aircraft.

**(f) Compliance**

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

**(g) Oxygen Mask Inspection and Replacement**

For airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD: Within 72 months after the effective date of this AD, do an inspection to determine whether any crew oxygen mask having part number (P/N) MLD20-626-1 is installed at the four locations identified in Boeing Service Bulletin B787-81205-SB350007-00, Issue 001, dated May 9, 2017. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the crew oxygen mask can be conclusively determined from that review. If any crew oxygen mask having P/N MLD20-626-1 is found installed, within 72 months after the effective date of this AD, do all applicable actions identified as “RC” in, and in accordance with, the Accomplishment Instructions of Boeing Service Bulletin B787-81205-SB350007-00, Issue 001, dated May 9, 2017.

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may install a crew oxygen mask having P/N MLD20-626-1 on any airplane.

**(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 Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, 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) For service information that contains steps that are labeled as RC, the provisions of paragraphs (i)(4)(i) and (i)(4)(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**

(1) For more information about this AD, contact Susan L. Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA; phone: 425-917-6457; fax: 425-917-6590; email: *susan.l.monroe@faa.gov*.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet *https://www.myboeingfleet.com*. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information

on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on August 17, 2017.

**Jeffrey E. Duven,**

*Director, System Oversight Division, Aircraft Certification Service.*

[FR Doc. 2017-18164 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 71**

**[Docket No. FAA-2017-0665; Airspace Docket No. 17-ASO-7]**

**Proposed Amendment of VOR Federal Airways V-56 and V-209 in the Vicinity of Kewanee, AL**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** This action proposes to modify VHF Omnidirectional Range (VOR) Federal airways V-56 and V-209, in the vicinity of Kewanee, AL. This action is necessary due to the planned decommissioning of the Kewanee, AL, VORTAC navigation aid, which provides navigation guidance for segments of the routes. This proposal would provide for the safe and efficient use of navigable airspace within the National Airspace System.

**DATES:** Comments must be received on or before October 12, 2017.

**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-2017-0665 and Airspace Docket No. 17-ASO-7 at the beginning of your comments. You may also submit comments through the Internet at *http://www.regulations.gov*. You may review the public docket containing the proposal, any comments received, and any final disposition in person in the Dockets Office between 9:00 a.m. and 5:00 p.m., Monday through Friday, except federal holidays. The Docket Office (telephone 1 (800) 647-5527, is on the ground floor of the building at the above address.

FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air\_traffic/publications/*. For further information,

you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741-6030, or go to *http://www.archives.gov/federal\_register/code\_of\_federal\_regulations/ibr\_locations.html*.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Paul Gallant, Airspace Policy Group, Office of Airspace Services, 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 VOR Federal airway route structure in the eastern United States to maintain the efficient flow of air traffic.

**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-2017-0665 and Airspace Docket No. 17-ASO-7) 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 <http://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-2017-0665 and Airspace Docket No. 17-ASO-7." 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 <http://www.regulations.gov>. Recently published rulemaking documents can also be accessed through the FAA's Web page at [http://www.faa.gov/air\\_traffic/publications/airspace\\_amendments/](http://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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016 and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this proposed rule. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

#### The Proposal

The FAA is proposing an amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 to modify VOR Federal airways V-56 and V-209, in the vicinity of Kewanee, AL, due to the planned

decommissioning of the Kewanee, AL, VORTAC. This proposal would also correct the location for the Choo Choo VORTAC to read Tennessee. The proposed route changes are described below.

**V-56:** V-56 currently extends between Meridian, MS, and New Bern, NC. The FAA proposes to remove the airway segments between Meridian, MS, and Tuskegee, AL. Therefore, the proposed amended route would extend between Tuskegee, AL, and New Bern, NC.

**V-209:** V-209 currently extends between Semmes, AL, and Choo Choo, TN. The FAA proposes to eliminate the Kewanee VORTAC from the route, which would result in a gap in the airway between the intersection of the Semmes, AL, 356° and Eaton, MS, 080° radials (*i.e.*, the charted YARBO fix, located approximately 43 NM north of Semmes, AL), and the intersection of the Bigbee, MS 139°(T)/135°(M) and Brookwood, AL 230°(T)/230°(M) radials (*i.e.*, the charted EUTAW fix, located approximately 41 NM northeast of Kewanee). Therefore, the proposed amended V-209 route would consist of two sections: First, between Semmes, AL, and the YARBO fix; and, after the gap, the airway would resume between the EUTAW fix, as currently charted, to Choo Choo, TN.

**Note:** In the V-209 description, both True (T) and Magnetic (M) degrees are stated because new radials are being used to describe the EUTAW fix. All other radials in this notice are stated in True degrees only since they are unchanged from currently published data.

Domestic VOR Federal airways are published in paragraph 6010(a) of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The VOR Federal airways listed in this document would be subsequently published in the Order.

#### 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016 and effective September 15, 2016, is amended as follows:

*Paragraph 6010(a) Domestic VOR Federal Airways.*

\* \* \* \* \*

#### V-56 [Amended]

From Tuskegee, AL; Columbus, GA; INT Columbus 087° and Macon, GA, 266° radials; Macon; Colliers, SC; Columbia, SC; Florence, SC; Fayetteville, NC, 41 miles 15 MSL, INT Fayetteville 098° and New Bern, NC 256° radials; to New Bern.

#### V-209 [Amended]

From Semmes, AL, via INT Semmes 356° and Eaton, MS, 080° radials. From INT Bigbee, MS 139°(T)/135°(M) and Brookwood, AL 230°(T)/230°(M) radials; Brookwood; Vulcan, AL; INT Vulcan 097° and Gadsden, AL, 233° radials; Gadsden; INT Gadsden 042° and Choo Choo, TN, 214° radials; Choo Choo.

Issued in Washington, DC, on August 22, 2017.

**Rodger A. Dean Jr.,**

*Manager, Airspace Policy Group.*

[FR Doc. 2017-18106 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 71**

[Docket No. FAA-2017-0615; Airspace  
Docket No. 17-ANM-25]

**Proposed Establishment of Class E  
Airspace; Madras, OR**

**AGENCY:** Federal Aviation  
Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking  
(NPRM).

**SUMMARY:** This action proposes to establish Class E airspace extending upward from 700 feet above the surface at Madras Municipal Airport, Madras, OR, amending the airspace for the safety and management of instrument flight rules (IFR) operations within the National Airspace System. The airspace designation was inadvertently removed from FAA Order 7400.9X on June 20, 2014.

**DATES:** Comments must be received on or before October 12, 2017.

**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-2017-0615; Airspace Docket No. 17-ANM-25, at the beginning of your comments. You may also submit comments through the Internet at <http://www.regulations.gov>.

FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call 202-741-6030, or go to [http://www.archives.gov/federal-register/code\\_of\\_federal-regulations/ibr\\_locations.html](http://www.archives.gov/federal-register/code_of_federal-regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Tom Clark, Federal Aviation Administration, Operations Support Group, Western Service Center, 1601 Lind Avenue SW.,

Renton, WA 98057; telephone (425) 203-4511.

**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 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 establish Class E airspace extending upward from 700 feet above the surface for Madras Municipal Airport, Madras, OR.

**History**

On April 12, 2007 (72 FR 18383) the FAA revised Class E airspace extending upward from 700 feet above the surface at Redmond, OR, to accommodate aircraft using new area navigation (RNAV) global positioning system (GPS) standard instrument approach procedures at City-County Airport, Madras, OR. The airspace for City-County Airport was defined by the Deschutes VORTAC radials. On June 20, 2014 (79 FR 35279) the FAA revised Class E airspace extending upward from 700 feet above the surface at Roberts Field, Redmond, OR, by removing the airspace defined by the Deschutes VORTAC. In doing so, the FAA inadvertently removed the airspace supporting Madras Municipal Airport (formerly City-County Airport), Madras, OR. This proposal would establish the amended controlled airspace designated for Madras Municipal Airport, Madras, OR.

**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 and be submitted in

triplicate to the address listed above. Persons wishing the FAA to acknowledge receipt of their comments on this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. FAA-2017-0615/Airspace Docket No. 17-ANM-25". The postcard will be date/time stamped and returned to the commenter.

All communications received before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this notice may be changed in light of the comments received. 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 <http://www.regulations.gov>. Recently published rulemaking documents can also be accessed through the FAA's Web page at [http://www.faa.gov/air\\_traffic/publications/airspace\\_amendments/](http://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 the **ADDRESSES** section for the 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 Northwest Mountain Regional Office of the Federal Aviation Administration, Air Traffic Organization, Western Service Center, Operations Support Group, 1601 Lind Avenue SW., Renton, WA 98057.

**Availability and Summary of  
Documents Proposed for Incorporation  
by Reference**

This document proposes to amend FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

**The Proposal**

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 by establishing Class E airspace extending upward from 700 feet above the surface at Madras Municipal Airport, Madras, OR. The

airspace would be established within 4 miles northwest and 3.5 miles southeast of the 028° bearing from Madras Municipal Airport to 6.5 miles northeast of the airport, and within 4 miles northwest and 3.5 miles southeast of the 208° from the airport to 7.5 miles southwest of the airport. Additionally, a small segment 2.1 miles wide would extend from the 180° bearing from the airport to 10.6 miles south of the airport. This proposal is necessary for the safety and management of IFR operations at the airport.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

### 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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, would 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

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration proposes to amend 14 CFR part 71 as follows:

## PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

### § 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

### ANM OR E5 Madras, OR [New]

Madras Municipal Airport, OR  
(Lat. 44°40′13″ N., long. 121°09′19″ W.)

That airspace extending upward from 700 feet above the surface within 4 miles northwest and 3.5 miles southeast of the 028° bearing from Madras Municipal Airport extending to 6.5 miles northeast of the airport, and within 4 miles northwest and 3.5 miles southeast of the 208° bearing from the airport extending to 7.5 miles southwest of the airport, and within 1.0 miles west and 1.1 miles east of the 180° bearing from the airport extending to 10.6 miles south of the airport.

Issued in Seattle, Washington, on August 15, 2017.

**David G. Parker,**

*Acting Group Manager, Operations Support Group, Western Service Center.*

[FR Doc. 2017–17878 Filed 8–25–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA–2017–0737; Airspace Docket No. 16–ANM–12]

### Proposed Establishment of Class E Airspace; Twin Bridges, MT

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** This action proposes to establish Class E airspace extending upward from 700 and 1,200 feet above the surface, at Twin Bridges Airport, Twin Bridges, MT, to accommodate new area navigation (RNAV) procedures at the airport. This action would ensure the safety and management of

Instrument Flight Rules (IFR) operations within the National Airspace System.

**DATES:** Comments must be received on or before October 12, 2017.

**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–2017–0737; Airspace Docket No. 16–ANM–12, at the beginning of your comments. You may also submit comments through the Internet at <http://www.regulations.gov>.

FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). For further information, you can contact the Airspace Policy 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 7400.11A at NARA, call (202) 741–6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**FOR FURTHER INFORMATION CONTACT:** Tom Clark, Federal Aviation Administration, Operations Support Group, Western Service Center, 1601 Lind Avenue SW., Renton, WA 98057; telephone (425) 203–4511.

### 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 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 establish Class E airspace to support

new RNAV procedures at Twin Bridges Airport, Twin Bridges, MT.

### 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 and be submitted in triplicate to the address listed above. Persons wishing the FAA to acknowledge receipt of their comments on this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. FAA-2017-0737; Airspace Docket No. 16-ANM-12". The postcard will be date/time stamped and returned to the commenter.

All communications received before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this notice may be changed in light of the comments received. 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 <http://www.regulations.gov>. Recently published rulemaking documents can also be accessed through the FAA's Web page at [http://www.faa.gov/air\\_traffic/publications/airspace\\_amendments/](http://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 the **ADDRESSES** section for the 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 Northwest Mountain Regional Office of the Federal Aviation Administration, Air Traffic Organization, Western Service Center, Operations Support Group, 1601 Lind Avenue SW., Renton, WA 98057.

### Availability and Summary of Documents Proposed for Incorporation by Reference

This document proposes to amend FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

### The Proposal

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) Part 71 by establishing Class E airspace extending upward from 700 feet above the surface at Twin Bridges Airport, Twin Bridges, MT, within a 4.1-mile radius of the airport and within 4.1 miles each side of the 011° bearing from the airport extending to 12 miles north of the airport, and within 4.1 miles each side of the 195° bearing from the airport extending to 13.5 miles south of the airport.

Additionally, this proposal would establish Class E airspace extending upward from 1,200 feet above the surface within a 20-mile radius of Twin Bridges Airport. This proposed airspace is necessary to support the new RNAV procedures for runways 17 and 35 for the safety and management of IFR operations at the airport.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

### 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, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, would 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

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration proposes to amend 14 CFR part 71 as follows:

### PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

#### § 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

*Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.*

\* \* \* \* \*

#### ANM MT E5 Twin Bridges, MT [New]

Twin Bridges Airport, MT  
(Lat. 45°32'07" N., long. 112°18'08" W.)

That airspace extending upward from 700 feet above the surface within a 4.1 mile radius of Twin Bridges Airport, and within 4.1 miles each side of the 011° bearing from the airport extending to 12 miles north of the airport, and within 4.1 miles each side of the 195° bearing from the airport extending to 13.5 miles south of the airport; and that airspace upward from 1,200 feet above the surface within a 20-mile radius of Twin Bridges Airport.

Issued in Seattle, Washington, on August 16, 2017.

**David G. Parker,**

*Acting Group Manager, Operations Support Group, Western Service Center.*

[FR Doc. 2017-17988 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

**DEPARTMENT OF DEFENSE****Department of the Army, Corps of Engineers****33 CFR Part 328****ENVIRONMENTAL PROTECTION AGENCY****40 CFR Parts 110, 112, 116, 117, 122, 232, 300, 302, and 401**

[EPA-HQ-OW-2017-0480; FRL-9966-99-OW]

**Definition of “Waters of the United States”—Schedule of Public Meetings**

**AGENCY:** Department of the Army; and Environmental Protection Agency (EPA).

**ACTION:** Announcement of public meeting dates.

**SUMMARY:** The Environmental Protection Agency (EPA) and the U.S. Department of the Army (the agencies) will hold ten teleconferences to hear from stakeholders their recommendations to revise the definition of “Waters of the United States” under the Clean Water Act (CWA). Nine of the teleconferences will be tailored to a specific sector, *i.e.*, agriculture (row crop, livestock, silviculture); conservation (hunters and anglers); small entities (small businesses, small organizations, small jurisdictions); construction and transportation; environment and public advocacy (including health and environmental justice); mining; industry (energy, chemical, oil/gas); scientific organizations and academia; and stormwater, wastewater management, and drinking water agencies. One of the teleconferences will be open to the public at large. The teleconferences will run throughout the fall on Tuesdays from 1:00 p.m.–3:00 p.m. eastern time, beginning on September 19, 2017. In addition, the agencies will hold an in-person meeting with small entities on October 23, 2017 from 9:00 a.m.–11 a.m., and will accept written recommendations from any member of the public.

**DATES:** Written recommendation must be received on or before November 28, 2017.

**ADDRESSES:** Submit your recommendations, identified by Docket ID No. EPA-HQ-OW-2017-0480, at <http://www.regulations.gov>. This docket, established as a courtesy to the stakeholder community, will be included in the administrative record of the regulation revising the definition of “Waters of the United States” under the Clean Water Act (CWA). The agencies

will not be formally responding to the recommendations. Follow the online instructions for submitting recommendations. Once submitted, your submission cannot be edited or removed from *Regulations.gov*. The agencies may publish any submission received to the 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.

**FOR FURTHER INFORMATION CONTACT:** Ms. Damaris Christensen, Office of Water (4504-T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone number: (202) 566-2428; email address: [CWAwotus@epa.gov](mailto:CWAwotus@epa.gov); or Ms. Stacey Jensen, Regulatory Community of Practice (CECW-CO-R), U.S. Army Corps of Engineers, 441 G Street NW., Washington, DC 20314; telephone number: (202) 761-5903; email address: [USACE\\_CWA\\_Rule@usace.army.mil](mailto:USACE_CWA_Rule@usace.army.mil).

**SUPPLEMENTARY INFORMATION:** On February 28, 2017, the President issued an Executive Order (E.O.) entitled “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the United States” Rule”. This E.O. states that it is in the national interest to ensure that the Nation’s navigable waters are kept free from pollution, while at the same time promoting economic growth, minimizing regulatory uncertainty, and showing due regard for the roles of the Congress and the States under the Constitution. The E.O. directs the agencies to review the Clean Water Rule for consistency with these priorities and publish for notice and comment a proposed rule rescinding or revising the rule, as appropriate and consistent with law. Further, the E.O. directs that the agencies shall consider interpreting the term “navigable waters,” as defined in 33 U.S.C. 1362(7), in a manner consistent with the opinion of Justice Antonin Scalia in *Rapanos v. United States*, 547 U.S. 715 (2006). Justice Scalia’s opinion considers CWA jurisdiction as including relatively permanent waters and wetlands with a continuous surface connection to relatively permanent waters.

The agencies are implementing the E.O. in two steps to provide as much certainty as possible as quickly as possible to the regulated community and the public during the development of the ultimate replacement rule. For the first step, the agencies proposed on July 27, 2017, a rule to re-codify the regulation that was in place prior to issuance of the Clean Water Rule and

that is being implemented now under the U.S. Court of Appeals for the Sixth Circuit’s stay of that rule.<sup>1</sup> The comment period for this first step proposed rule is open until September 27, 2017.

For the second step, the agencies plan to propose a new definition that would replace the approach in the 2015 Clean Water Rule with one that is consistent with the approach outlined in the E.O. In June 2017, the agencies completed consultation processes with tribes as well as state and local governments on the step 2 rulemaking. The meetings described below will provide other interested stakeholders opportunity to provide pre-proposal feedback on this second step rule to revise the definition of “waters of the U.S.”

Both EPA and the Corps are aware that the scope of CWA jurisdiction is of intense interest to a broad array of stakeholders and therefore want to provide time for broad pre-proposal input. The teleconferences in this notice are intended to solicit recommendations for Step 2 and potential approaches to defining “waters of the United States.” During the upcoming teleconferences, EPA will provide brief background information on the step 2 rulemaking, and progress to date. Stakeholders will have the opportunity to provide input, particularly with regard to the charge in the E.O. and opinion of Justice Scalia.

The teleconferences will be held on a weekly basis beginning September 19 and will continue each Tuesday thereafter for ten weeks. Each will run from 1:00 p.m. to 3:00 p.m. eastern time. Information on how to register for each of these meetings is available on the EPA Web site at <https://www.epa.gov/wotus-rule/outreach-meetings>. Registration for each webinar will close a week prior. Persons or organizations wishing to provide verbal recommendations during the teleconference will be selected on a first-come, first-serve basis. Due to the expected volume of participants, individuals will be asked to limit their oral presentation to three minutes.

Supporting materials and comments from those who did not have an opportunity to speak can be submitted to the docket as discussed above. The schedule for the Waters of the US webinars is as follows:

- Tuesday, September 19, 2017—small entities (small businesses, small

<sup>1</sup> The Clean Water Rule was promulgated on June 29, 2015 (80 FR 37054). It was in effect in most of the country for a two-month period before the Sixth Circuit Court of Appeals issued a nation-wide stay. The agencies are currently implementing the previous regulatory definition of “waters of the United States” in light of the stay.

organizations and small governmental jurisdictions);

- Tuesday, September 26, 2017—environment and public advocacy;
- Tuesday, October 3, 2017—conservation, *e.g.*, hunters and anglers;
- Tuesday, October 10, 2017—construction and transportation;
- Tuesday, October 17, 2017—agriculture;
- Tuesday, October 24, 2017—industry;
- Tuesday, October 31, 2017—mining;
- Tuesday, November 7, 2017—scientific organizations and academia;
- Tuesday, November 14, 2017—stormwater, wastewater management and drinking water agencies; and
- Tuesday, November 21, 2017—open to general public.

The agencies are also planning an in-person meeting with small entities, which will be held on Monday, October 23, 2017, from 9:00 to 11:00 a.m. Eastern Time at the U.S. EPA's Headquarters located at 1200 Pennsylvania Avenue NW., Washington, DC 20003. To facilitate the building security process, and to request reasonable accommodation, *those who wish to attend must contact Joan B. Rogers* (202-564-6568 or [rogers.joanb@epa.gov](mailto:rogers.joanb@epa.gov)), no later than Friday, October 13, 2017. RSVPs will be accepted until October 13, or until room capacity has been reached (100 max), whichever occurs first.

Dated: August 18, 2017.

**John Goodin,**

*Acting Director, Office of Wetlands, Oceans and Watersheds, Office of Water, Environmental Protection Agency.*

Dated: August 18, 2017.

**Douglas W. Lamont,**

*Deputy Assistant Secretary of the Army (Project Planning and Review), performing the duties of the Assistant Secretary of the Army for Civil Works.*

[FR Doc. 2017-18214 Filed 8-25-17; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R03-OAR-2017-0394; FRL-9966-95-Region 3]

#### Approval and Promulgation of Air Quality Implementation Plans; Maryland; Approval of an Alternative Volatile Organic Compound Emission Standard

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) proposes to approve the state implementation plan (SIP) revision submitted by the State of Maryland. This revision incorporates by reference a Maryland Department of the Environment (MDE) order that establishes an alternative volatile organic compound (VOC) emission standard for National Gypsum Company (NGC) to ensure that it remains a minor VOC source. In the Final Rules section of this issue of the **Federal Register**, EPA is approving Maryland's SIP submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates no adverse comments. If no adverse comments are received in response to this action, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time.

**DATES:** Comments must be received in writing by September 27, 2017.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R03-OAR-2017-0394 at <http://www.regulations.gov>, or via email to [stahl.cynthia@epa.gov](mailto:stahl.cynthia@epa.gov). For comments submitted at [Regulations.gov](http://www.Regulations.gov), follow the

online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](http://www.Regulations.gov). For either manner of submission, the 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, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:**

Gregory A. Becoat, (215) 814-2036, or by email at [becoat.gregory@epa.gov](mailto:becoat.gregory@epa.gov).

**SUPPLEMENTARY INFORMATION:** For further information, please see the information provided in the direct final action, with the same title, that is located in the "Rules and Regulations" section of this issue of the **Federal Register** publication. Please note that if EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment.

Dated: August 12, 2017.

**Cecil Rodrigues,**

*Acting Regional Administrator, Region III.*

[FR Doc. 2017-18085 Filed 8-25-17; 8:45 am]

**BILLING CODE 6560-50-P**

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

### Food Safety and Inspection Service

[Docket No. FSIS–2016–0042]

#### Reopening of Nomination Period for Membership on the National Advisory Committee on Microbiological Criteria for Foods

**AGENCY:** Food Safety and Inspection Service, USDA.

**ACTION:** Notice.

**SUMMARY:** On December 7, 2016, the U.S. Department of Agriculture (USDA) announced in a **Federal Register** notice that it was soliciting nominations for membership on the National Advisory Committee on Microbiological Criteria for Foods (NACMCF) to fill 15 vacancies. The closing date for nominations was January 6, 2017. This notice reopens the nomination period for 30 days. This notice also announces that there are two more vacancies on the committee. Since the original announcement was made, two additional members have left the committee. The USDA is now seeking nominations to fill 17 vacancies. Nominations submitted during the original submission period do not need to be resubmitted.

**DATES:** All materials must be received by September 27, 2017.

**ADDRESSES:** Nomination packages should be sent via email to [karen.thomas-sharp@fsis.usda.gov](mailto:karen.thomas-sharp@fsis.usda.gov) and mailed to: Secretary, U.S. Department of Agriculture, 1400 Independence Avenue SW., Washington, DC 20250, Attn: FSIS\Office of Public Health Science/National Advisory Committee on Microbiological Criteria for Foods (Karen Thomas-Sharp).

**FOR FURTHER INFORMATION CONTACT:** Ms. Karen Thomas-Sharp, Advisory Committee Specialist, by telephone at 202–690–6620 or by email [karen.thomas-sharp@fsis.usda.gov](mailto:karen.thomas-sharp@fsis.usda.gov).

The Food Safety and Inspection Service (FSIS) invites interested persons to submit comments on this notice. Comments may be submitted by either of the following methods: Federal eRulemaking Portal: This Web site (<http://www.regulations.gov/>) provides the ability to type short comments directly into the comment field on this Web page or attach a file for lengthier comments. Follow the online instructions at that site for submitting comments. Mail, including CD-ROMS and hand or courier delivered items: Send to Docket Clerk, USDA, FSIS Docket Room, Patriots Plaza 3, 355 E Street SW., Room 8–163A, Washington, DC 20250–3700 between 8:30 a.m. and 4:30 p.m., Monday through Friday.

**Instructions:** All items submitted by mail or email must include the Agency name and docket number FSIS–2016–0042. Comments received in response to this docket will be made available for public inspection and posted without change, including any personal information, to <http://www.regulations.gov/>.

**Docket:** For access to background documents or comments received, go to the FSIS Docket Room at Patriots Plaza 3, 355 E Street SW., Room 8–164, Washington, DC 20250–3700 between 8:30 a.m. and 4:30 p.m., Monday through Friday. All comments submitted in response to this notice, as well as background information used by FSIS in developing this document, will be available for public inspection in the FSIS Docket Room at the address listed above between 8:30 a.m. and 4:30 p.m., Monday through Friday.

#### SUPPLEMENTARY INFORMATION:

##### Background

The NACMCF was established in March 1988, in response to a recommendation in a 1985 report of the National Academy of Sciences Committee on Food Protection, Subcommittee on Microbiological Criteria, “An Evaluation of the Role of Microbiological Criteria for Foods.” The current charter for the NACMCF and other information about the Committee are available to the public for viewing on the FSIS Web site at: <http://www.fsis.usda.gov/nacmcf>.

Nominees are sought who have scientific expertise in the fields of in the fields of microbiology, epidemiology, food technology (food, clinical, and

predictive), toxicology, risk assessment, infectious disease, biostatistics, and other related sciences. Persons from the government, industry, academia, and consumer advocacy groups are invited to submit nominations.

The Committee provides scientific advice and recommendations to the Secretary of Agriculture and the Secretary of Health and Human Services concerning the development of microbiological criteria by which the safety and wholesomeness of food can be assessed. For example, one of the most recent efforts of the Committee is to provide the best scientific information available on Shiga Toxin producing *E. coli*, including providing recommendations on optimal detection and identification methodologies.

Appointments to the Committee will be made by the Secretary of Agriculture after consultation with the Secretary of Health and Human Services to ensure that recommendations made by the Committee take into account the needs of the diverse groups served by the Department. On December 7, 2016, the USDA announced that it was seeking nominations to fill 15 vacancies (81 FR 88197). Since the original announcement was made, two additional members have left the committee. The USDA is now seeking to fill 17 vacancies. Advisory Committee members serve a two-year term, renewable for two consecutive terms.

The full Committee expects to meet at least once a year by teleconference or in-person, and the meetings will be announced in the **Federal Register**. The subcommittees will meet as deemed necessary by the chairperson through working group meetings in an open public forum. Subcommittees also may meet through teleconference or by computer-based conferencing (Webinars). Subcommittees may invite technical experts to present information for consideration by the subcommittee. The subcommittee meetings will not be announced in the **Federal Register**. FSIS will announce the agenda and subcommittee working group meetings through the Constituent Update, available online at: <http://www.fsis.usda.gov/cu>.

NACMCF holds subcommittee meetings in order to accomplish the work of NACMCF; all subcommittee work is reviewed and approved during a public meeting of the full Committee,

as announced in the **Federal Register**. All data and records available to the full Committee are expected to be available to the public when the full Committee reviews and approves the work of the subcommittee. Advisory Committee members are expected to attend all in-person meetings during the two-year term to ensure the smooth functioning of the advisory committee. However, on rare occasions, attendance through teleconferencing may be permitted.

Members must be prepared to work outside of scheduled Committee and subcommittee meetings and may be required to assist in document preparation. Committee members serve on a voluntary basis; however, travel expenses and per diem reimbursement are available.

#### Regarding Nominees Who Are Selected

All SGE and Federal government employee nominees who are selected must complete the Office of Government Ethics (OGE) 450 Confidential Financial Disclosure Report before rendering any advice or before their first meeting. With the exception of the consumer representative committee member, all committee members will be reviewed pursuant to 18 U.S.C. 208 for conflicts of interest relating to specific NACMCF work charges, and financial disclosure updates will be required annually. Members subject to financial disclosure must report any changes in financial holdings requiring additional disclosure. OGE 450 forms are available on-line at: <https://www2.oge.gov/web/oge.nsf/Confidential%20Financial%20Disclosure>.

#### Additional Public Notification

Public awareness of all segments of rulemaking and policy development is important. Consequently, FSIS will announce this **Federal Register** publication on-line through the FSIS Web page located at: <http://www.fsis.usda.gov/federal-register>.

FSIS also will make copies of this publication available through the FSIS Constituent Update, which is used to provide information regarding FSIS policies, procedures, regulations, **Federal Register** notices, FSIS public meetings, and other types of information that could affect or would be of interest to our constituents and stakeholders. The Update is available on the FSIS Web page. Through the Web page, FSIS is able to provide information to a much broader, more diverse audience. In addition, FSIS offers an email subscription service which provides automatic and customized access to selected food safety news and information. This service is available at:

<http://www.fsis.usda.gov/subscribe>. Options range from recalls to export information, regulations, directives, and notices. Customers can add or delete subscriptions themselves, and have the option to password protect their accounts.

#### USDA Non-Discrimination Statement

No agency, officer, or employee of the USDA shall, on the grounds of race, color, national origin, religion, sex, gender identity, sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, or political beliefs, exclude from participation in, deny the benefits of, or subject to discrimination any person in the United States under any program or activity conducted by the USDA.

#### How To File a Complaint of Discrimination

To file a complaint of discrimination, complete the USDA Program Discrimination Complaint Form, which may be accessed online at [http://www.ocio.usda.gov/sites/default/files/docs/2012/Complain\\_combined\\_6\\_8\\_12.pdf](http://www.ocio.usda.gov/sites/default/files/docs/2012/Complain_combined_6_8_12.pdf), or write a letter signed by you or your authorized representative.

Send your completed complaint form or letter to USDA by mail, fax, or email:

*Mail:* U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue SW., Washington, DC 20250-9410.

*Fax:* (202) 690-7442.

*Email:* [program.intake@usda.gov](mailto:program.intake@usda.gov).

Persons with disabilities who require alternative means for communication (Braille, large print, audiotape, etc.), should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

Done at Washington, DC, August 23, 2017.

**Paul Kiecker,**

*Acting Administrator.*

[FR Doc. 2017-18168 Filed 8-25-17; 8:45 am]

**BILLING CODE 3410-DM-P**

#### BROADCASTING BOARD OF GOVERNORS

##### Sunshine Act Meeting

**DATE AND TIME:** Wednesday, August 30, 2017, 1:30 p.m. EDT.

**PLACE:** Broadcasting Board of Governors, Cohen Building, Room 3321, 330 Independence Ave. SW., Washington, DC 20237.

**SUBJECT:** Notice of Closed Meeting of the Broadcasting Board of Governors.

**SUMMARY:** The members of the Broadcasting Board of Governors (BBG) will meet in a special session to discuss

and approve a budget submission for Fiscal Year 2019. According to Office of Management and Budget (OMB) Circular A-11, Section 22.1, all agency budgetary materials and data are considered confidential prior to the President submitting a budget to Congress. In accordance with section 22.5 of Circular A-11, the BBG has determined that its meeting should be closed to public observation pursuant to 5 U.S.C. 552b(c)(9)(B). In accordance with the Government in the Sunshine Act and BBG policies, the meeting will be recorded and a transcript of the proceedings, subject to the redaction of information protected by 5 U.S.C. 552b(c)(9)(B), will be made available to the public. The publicly-releasable transcript will be available for download at [www.bbg.gov](http://www.bbg.gov) within 21 days of the date of the meeting.

Information regarding member votes to close the meeting and expected attendees can also be found on the Agency's public Web site.

**CONTACT PERSON FOR MORE INFORMATION:** Persons interested in obtaining more information should contact Oanh Tran at (202) 203-4545.

**Oanh Tran,**

*Managing Director.*

[FR Doc. 2017-18309 Filed 8-24-17; 4:15 pm]

**BILLING CODE 8610-01-P**

#### BROADCASTING BOARD OF GOVERNORS

##### Government in the Sunshine Act Meeting Notice

**DATE AND TIME:** Wednesday, August 30, 2017, 2:15 p.m. EDT

**PLACE:** Cohen Building, Room 3321, 330 Independence Ave. SW., Washington, DC 20237.

**SUBJECT:** Notice of Meeting of the Broadcasting Board of Governors.

**SUMMARY:** The Broadcasting Board of Governors (Board) will be meeting at the time and location listed above. The Board will vote on a consent agenda consisting of the minutes of its June 14, 2017 meeting. The Board will receive a report from the Chief Executive Officer and Director of BBG.

This meeting will be available for public observation via streamed webcast, both live and on-demand, on the agency's public Web site at [www.bbg.gov](http://www.bbg.gov). Information regarding this meeting, including any updates or adjustments to its starting time, can also be found on the agency's public Web site.

The public may also attend this meeting in person at the address listed

above as seating capacity permits. Members of the public seeking to attend the meeting in person must register at <https://bbgboardmeetingaugust2017.eventbrite.com> by 12:00 p.m. (EDT) on August 29. For more information, please contact BBG Public Affairs at (202) 203-4400 or by email at [pubaff@bbg.gov](mailto:pubaff@bbg.gov).  
**CONTACT PERSON FOR MORE INFORMATION:** Persons interested in obtaining more information should contact Oanh Tran at (202) 203-4545.

**Oanh Tran,**  
*Managing Director.*

[FR Doc. 2017-18310 Filed 8-24-17; 4:15 pm]

**BILLING CODE 8610-01-P**

**DEPARTMENT OF COMMERCE**

**Economic Development Administration**

**Notice of Petitions by Firms for Determination of Eligibility To Apply for Trade Adjustment Assistance**

**AGENCY:** Economic Development Administration, Commerce.

**ACTION:** Notice and opportunity for public comment.

**SUMMARY:** Pursuant to section 251 of the Trade Act 1974, as amended, the Economic Development Administration (EDA) has received petitions for

certification of eligibility to apply for Trade Adjustment Assistance from the firms listed below. Accordingly, EDA has initiated investigations to determine whether increased imports into the United States of articles like or directly competitive with those produced by each of these firms contributed importantly to the total or partial separation of the firm's workers, or threat thereof, and to a decrease in sales or production of each petitioning firm.

**SUPPLEMENTARY INFORMATION:**

**LIST OF PETITIONS RECEIVED BY EDA FOR CERTIFICATION ELIGIBILITY TO APPLY FOR TRADE ADJUSTMENT ASSISTANCE**  
 [7/27/2017 through 8/14/2017]

Firm name	Firm address	Date accepted for investigation	Product(s)
Wasatch Photonics, Inc .....	1305 North 1000 West, Suite 120, Logan, UT 84321.	8/3/2017	The firm manufactures holographic gratings, spectroscopic instruments, and optical coherence tomography solutions.
Electro-Hydraulic Automation, Inc.	1620 Blairs Ferry Road NE., Cedar Rapids, IA 52402.	8/7/2017	The firm manufactures hydraulic and pneumatic power units.

Any party having a substantial interest in these proceedings may request a public hearing on the matter. A written request for a hearing must be submitted to the Trade Adjustment Assistance for Firms Division, Room 71030, Economic Development Administration, U.S. Department of Commerce, Washington, DC 20230, no later than ten (10) calendar days following publication of this notice.

Please follow the requirements set forth in EDA's regulations at 13 CFR 315.9 for procedures to request a public hearing. The Catalog of Federal Domestic Assistance official number and title for the program under which these petitions are submitted is 11.313, Trade Adjustment Assistance for Firms.

**Irette Patterson,**  
*Program Analyst.*

[FR Doc. 2017-17616 Filed 8-25-17; 8:45 am]

**BILLING CODE 3510-WH-P**

**SUMMARY:** The Department of Commerce (the Department) preliminarily determines that countervailable subsidies are being provided to producers and/or exporters of biodiesel from the Republic of Indonesia (Indonesia). The period of investigation is January 1, 2016, through December 31, 2016. Interested parties are invited to comment on this preliminary determination.

**DATES:** August 28, 2017.

**FOR FURTHER INFORMATION CONTACT:** Gene Calvert or Joseph Traw, AD/CVD Operations, Office VII, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482-3586 or (202) 482-6079, respectively.

**SUPPLEMENTARY INFORMATION:**

**Background**

This preliminary determination is made in accordance with section 703(b) of the Tariff Act of 1930, as amended (the Act). The Department published the notice of initiation of this investigation on April 19, 2017.<sup>1</sup> On June 5, 2017, the Department postponed the preliminary determination of this investigation until no later than August 20, 2017. However, because August 20, 2017, falls on a

Sunday, the preliminary determination was postponed until August 21, 2017.<sup>2</sup> A complete description of the events that followed the initiation of this investigation can be found in the Preliminary Decision Memorandum.<sup>3</sup> A list of topics discussed 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 <http://access.trade.gov>, and is available to parties in the Central Records Unit, room B8024 of the main Department of Commerce building. A complete version of the Preliminary Decision Memorandum can also be accessed directly at <http://enforcement.trade.gov/frn/>. The signed and electronic versions of the

**DEPARTMENT OF COMMERCE**

**International Trade Administration**

[C-560-831]

**Biodiesel From the Republic of Indonesia: Preliminary Affirmative Countervailing Duty Determination**

**AGENCY:** Enforcement and Compliance, International Trade Administration, Department of Commerce.

<sup>1</sup> See *Biodiesel from Argentina and Indonesia: Initiation of Countervailing Duty Investigations*, 82 FR 18423 (April 19, 2017) (*Initiation Notice*).

<sup>2</sup> See *Biodiesel From Argentina and Indonesia: Postponement of Preliminary Determinations of Countervailing Duty Investigations*, 82 FR 25773 (June 5, 2017); see also *Notice of Clarification: Application of "Next Business Day" Rule for Administrative Determination Deadlines Pursuant to the Tariff Act of 1930, As Amended*, 70 FR 24533 (May 10, 2005).

<sup>3</sup> See Department Memorandum, "Decision Memorandum for the Preliminary Affirmative Determination of the Countervailing Duty Investigation of Biodiesel from the Republic of Indonesia," dated concurrently with, and hereby adopted by, this notice (Preliminary Decision Memorandum).

Preliminary Decision Memorandum are identical in content.

### Scope of the Investigation

The product covered by this investigation is biodiesel from Indonesia. A complete description of the scope of this investigation is included as Appendix I to this notice.

### Scope Comments

In accordance with the *Preamble* to the Department's regulations,<sup>4</sup> the *Initiation Notice* set aside a period of time for interested parties to raise issues regarding product coverage (*i.e.*, scope).<sup>5</sup> No interested party commented on the scope of this investigation as it appeared in the *Initiation Notice*.

### Methodology

The Department is conducting this investigation in accordance with section 701 of the Act. For each of the subsidy programs found to be countervailable, the Department preliminarily determines that there is a subsidy, *i.e.*, a financial contribution provided by an "authority" that gives rise to a benefit to the recipient, and that the subsidy is specific.<sup>6</sup>

### Preliminary Determination and Suspension of Liquidation

We preliminarily determine that countervailable subsidies are being provided with respect to the manufacture, production, or exportation of the subject merchandise. In accordance with sections 703(d) and 705(c)(5)(A) of the Act, for companies not individually examined, we apply an "all-others" rate, which is normally calculated by weighting the subsidy rates of the individually-examined company respondents by those companies' exports of the subject merchandise to the United States during the period of investigation. Under section 705(c)(5)(A)(i) of the Act, the "all-others" rate should exclude zero and *de minimis* rates or any rates based solely on the facts otherwise available calculated for the producers/exporters individually investigated. Neither of the individually-examined company respondents' rates in this preliminary determination is zero, *de minimis*, or based entirely on facts otherwise available. Accordingly, in this preliminary determination, we have

<sup>4</sup> See *Antidumping Duties; Countervailing Duties: Final Rule*, 62 FR 27296, 27323 (May 19, 1997) (*Preamble*).

<sup>5</sup> See *Initiation Notice* at the section, "Comments on Scope of the Investigations."

<sup>6</sup> See sections 771(5)(B) and 771(D) of the Act (regarding financial contribution); see also section 771(5)(E) of the Act regarding benefit, and section 771(5A) of the Act regarding specificity.

calculated the "all-others" rate by weight averaging the calculated subsidy rates of the two individually examined company respondents. In order to ensure that business proprietary information is not disclosed through the all-others rate, we are using a weighted average of the publicly-ranked information provided by Musim Mas and Wilmar Trading for their sales of subject merchandise to the United States during the POI. The Department preliminarily determines that the following estimated countervailable subsidy rates exist:

Company	Subsidy rate (percent)
PT Musim Mas .....	68.28
Wilmar Trading PTE Ltd. ....	41.06
All-Others .....	44.92

In accordance with sections 703(d)(1)(B) and 703(d)(2) of the Act, we are directing U.S. Customs and Border Protection (CBP) to suspend liquidation of all entries of biodiesel from Indonesia that are entered, or withdrawn from warehouse, for consumption, on or after the date of the publication of this notice in the **Federal Register**, and to require a cash deposit equal to the subsidy rates indicated above.

### Disclosure

The Department intends to disclose to interested parties the calculations performed in connection of this preliminary determination within five days of its public announcement.<sup>7</sup>

### Verification

As provided in section 782(i)(1) of the Act, we intend to verify the information submitted by the respondents prior to making our final determination.

### Public Comment and Request for Hearing

Case briefs or other written comments may be submitted to the Assistant Secretary for Enforcement and Compliance via ACCESS no later than seven days after the date on which the last verification report is issued in this investigation. Rebuttal briefs, limited to issues raised in case briefs, may be submitted by no later than five days after the deadline for case briefs.<sup>8</sup> A table of contents, list of authorities used, and an executive summary of issues should accompany any briefs submitted to the Department, pursuant to 19 CFR 351.309(c)(2) and 19 CFR 351.309(d)(2).

<sup>7</sup> See 19 CFR 351.224(b).

<sup>8</sup> See 19 CFR 351.309; see also 19 CFR 351.303 for general filing requirements.

This summary should be limited to five pages, including footnotes.

Pursuant to 19 CFR 351.310(c) interested parties who wish to request a hearing, limited to issues raised in case and rebuttal briefs, must submit a written request to the Assistant Secretary for Enforcement and Compliance, U.S. Department of Commerce, via ACCESS. An electronically-filed request must be successfully received, in its entirety, by ACCESS by 5:00 p.m. Eastern Time, within 30 days after the date of the 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 hearing is requested, the Department intends to hold the hearing at the U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230, at a date and time to be determined. Parties will be notified of the date, time, and location of any hearing via ACCESS. Parties should confirm by telephone the date, time, and location of the hearing date two days before the scheduled date of the hearing.

### U.S. International Trade Commission

Pursuant to section 703(f) of the Act, we will notify the U.S. International Trade Commission (ITC) of this preliminary determination. In addition, we are making available to the ITC all non-privileged and non-proprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order, without the written consent of the Assistant Secretary for Enforcement and Compliance.

In accordance with section 705(b)(2) of the Act, if our final determination is affirmative,<sup>9</sup> the ITC will make its final determination within 45 days after the Department makes its final determination.

This determination is issued and published pursuant to sections 703(f) and 777(i) of the Act, and 19 CFR 351.205(c).

<sup>9</sup> As of the signing of this notice, the petitioner (the National Biodiesel Fair Trade Coalition) had not requested that the date of the final determination of this investigation be aligned with the date of the final determination of the companion antidumping investigation, pursuant to section 705(a)(1) of the Act. Therefore, the current date for the final determination of this investigation is 75 days from the signature of this preliminary determination, November 6, 2017.

Dated: August 21, 2017.

**Gary Taverman,**

*Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.*

**Appendix I—List of Topics Discussed in the Preliminary Decision Memorandum**

- I. Summary
- II. Background
- III. Scope Comments
- IV. Scope of the Investigation
- V. Injury Test
- VI. New Subsidy Allegation
- VII. Subsidies Valuation
- VIII. Analysis of Programs
- IX. Calculation of All-Others Rate
- X. ITC Notification
- XI. Disclosure and Public Comment
- XII. Verification
- XIII. Conclusion

Appendix I—List of Additional Companies Preliminarily Found to be Cross-Owned with Musim Mas and Intibenua

Appendix II—List of Additional Companies Preliminarily Found to be Cross-Owned with Wilmar Trading

**Appendix II—Scope of the Investigation**

The product covered by this investigation is biodiesel, which is a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, including biologically-based waste oils or greases, and other biologically based oil or fat sources. This investigation covers biodiesel in pure form (B100) as well as fuel mixtures containing at least 99 percent biodiesel by volume (B99). For fuel mixtures containing less than 99 percent biodiesel by volume, only the biodiesel component of the mixture is covered by the scope of this investigation.

Biodiesel is generally produced to American Society for Testing and Materials International (ASTM) D6751 specifications, but it can also be made to other specifications. Biodiesel commonly has one of the following Chemical Abstracts Service (CAS) numbers, generally depending upon the feedstock used: 67784-80-9 (soybean oil methyl esters); 91051-34-2 (palm oil methyl esters); 91051-32-0 (palm kernel oil methyl esters); 73891-99-3 (rapeseed oil methyl esters); 61788-61-2 (tallow methyl esters); 68990-52-3 (vegetable oil methyl esters); 129828-16-6 (canola oil methyl esters); 67762-26-9 (unsaturated alkylcarboxylic acid methyl ester); or 68937-84-8 (fatty acids, C12–C18, methyl ester).

The B100 product subject to this investigation is currently classifiable under subheading 3826.00.1000 of the Harmonized Tariff Schedule of the United States (HTSUS), while the B99 product is currently classifiable under HTSUS subheading 3826.00.3000. Although the HTSUS subheadings, ASTM specifications, and CAS numbers are provided for convenience and customs purposes, the written description of the scope is dispositive.

[FR Doc. 2017–18167 Filed 8–25–17; 8:45 am]

**BILLING CODE 3510-DS-P**

**DEPARTMENT OF COMMERCE**

**International Trade Administration**

[C–357–821]

**Biodiesel From Argentina: Preliminary Affirmative Countervailing Duty Determination and Preliminary Affirmative Critical Circumstances Determination, in Part**

**AGENCY:** Enforcement and Compliance, International Trade Administration, Department of Commerce.

**SUMMARY:** The Department of Commerce (the Department) preliminarily determines that countervailable subsidies are being provided to producers and exporters of biodiesel from Argentina. The period of investigation is January 1, 2016, through December 31, 2016.

**DATES:** August 28, 2017.

**FOR FURTHER INFORMATION CONTACT:** Elfi Blum-Page or Kathryn Wallace, AD/CVD Operations, Office VII, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–0197 or (202) 482–6251, respectively.

**SUPPLEMENTARY INFORMATION:**

**Background**

This preliminary determination is made in accordance with section 703(b) of the Tariff Act of 1930, as amended (the Act). The Department published the notice of initiation of this investigation on April 19, 2017.<sup>1</sup> On June 5, 2017, the Department postponed the preliminary determination of this investigation to August 20, 2017. However, because August 20, 2017, falls on a Sunday, the preliminary determination was postponed until August 21, 2017.<sup>2</sup> A complete description of the events that followed the initiation of this investigation, *see* the Preliminary Decision Memorandum.<sup>3</sup> A list of topics discussed in the Preliminary Decision Memorandum is included as Appendix

<sup>1</sup> *See Biodiesel from Argentina and Indonesia: Initiation of Countervailing Duty Investigations*, 82 FR 18423 (April 19, 2017) (*Initiation Notice*).

<sup>2</sup> *See Biodiesel from Argentina and Indonesia: Postponement of Preliminary Determinations of Antidumping Duty Investigations*, 82 FR 25773 (June 5, 2017); *see also Notice of Clarification: Application of “Next Business Day” Rule for Administrative Determination Deadlines Pursuant to the Tariff Act of 1930, As Amended*, 70 FR 24533 (May 10, 2005).

<sup>3</sup> *See* Memorandum, “Decision Memorandum for the Preliminary Determination of the Countervailing Duty Investigation of Biodiesel from Argentina,” dated concurrently with, and hereby adopted by, this notice (Preliminary Decision Memorandum).

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 <http://access.trade.gov>, and is available to all parties in the Central Records Unit, room B8024 of the main Department of Commerce building. 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 Investigation**

The product covered by this investigation is biodiesel from Argentina. For a complete description of the scope of this investigation, *see* Appendix I.

**Scope Comments**

In accordance with the preamble to the Department’s regulations,<sup>4</sup> the *Initiation Notice* set aside a period of time for parties to raise issues regarding product coverage, (*i.e.*, scope).<sup>5</sup> No interested party commented on the scope of the investigation as it appeared in the *Initiation Notice*.

**Methodology**

The Department is conducting this investigation in accordance with section 701 of the Act. For each of the subsidy programs found countervailable, the Department preliminarily determines that there is a subsidy, *i.e.*, a financial contribution by an “authority” that gives rise to a benefit to the recipient, and that the subsidy is specific.<sup>6</sup>

In making these findings, the Department relied, in part, on facts available and, because one or more respondents did not act to the best of their ability to respond to the Department’s requests for information, an adverse inference was drawn, where appropriate, in selecting from among the facts otherwise available.<sup>7</sup> For further information, *see* “Use of Facts Otherwise Available and Adverse Inferences” in the Preliminary Decision Memorandum.

<sup>4</sup> *See Antidumping Duties; Countervailing Duties, Final Rule*, 62 FR 27296, 27323 (May 19, 1997).

<sup>5</sup> *See Initiation Notice*.

<sup>6</sup> *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.

<sup>7</sup> *See* sections 776(a) and (b) of the Act.

### Preliminary Affirmative Determination of Critical Circumstances, in Part

In accordance with section 703(e)(1) of the Act, the Department preliminarily determines that critical circumstances exist with respect to imports of biodiesel from Argentina for LDC Argentina and Vicentin, but do not exist with respect to all other exporters or producers not individually examined. For a full description of the methodology and results of the Department's analysis, see the Preliminary Decision Memorandum.

### All-Others Rate

Sections 703(d) and 705(c)(5)(A) of the Act provide that in the preliminary determination, the Department shall determine an estimated all-others rate for companies not individually examined. This rate shall be an amount equal to the weighted average of the estimated subsidy rates established for those companies individually examined, excluding any zero and *de minimis* rates and any rates based entirely under section 776 of the Act. In this investigation, the Department calculated individual estimated countervailable subsidy rates for LDC Argentina and Vicentin that are not zero, *de minimis*, or based entirely on facts otherwise available. The Department calculated the all-others' rate using a weighted average of the individual estimated subsidy rates calculated for the examined respondents using each company's publicly-ranged values for the merchandise under consideration.<sup>8</sup>

### Preliminary Determination

The Department preliminarily determines that the following estimated countervailable subsidy rates exist:

Company	Subsidy rate (percent)
LDC Argentina S.A. <sup>9</sup> .....	50.29
Vicentin S.A.I.C. <sup>10</sup> .....	64.17
All-Others .....	57.01

### Suspension of Liquidation

In accordance with section 703(d)(1)(B) and (d)(2) of the Act, the Department will direct U.S. Customs and Border Protection (CBP) to suspend liquidation of entries 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**. Further, pursuant to 19 CFR 351.205(d), the Department will instruct CBP to require a cash deposit equal to the rates indicated above.

Section 703(e)(2) of the Act provides that, given an affirmative determination of critical circumstances, any suspension of liquidation shall apply to unliquidated entries of merchandise entered, or withdrawn from warehouse, for consumption on or after the later of (a) the date which is 90 days before the date on which the suspension of liquidation was first ordered, or (b) the date on which notice of initiation of the investigation was published. The Department preliminarily finds that critical circumstances exist for imports of subject merchandise produced and/or exported by LDC Argentina and Vicentin. In accordance with section 703(e)(2)(A) of the Act, the suspension of liquidation shall apply to unliquidated entries of merchandise from the exporters/producers identified in this paragraph that were entered, or withdrawn from warehouse, for consumption on or after the date which is 90 days before the publication of this notice.

### Disclosure

The Department intends to disclose its calculations and analysis performed to interested parties in this preliminary determination within five days of its public announcement, or if there is no public announcement, within five days of the date of this notice in accordance with 19 CFR 351.224(b).

<sup>9</sup> As discussed in the Preliminary Decision Memorandum, the Department has found the following companies to be cross-owned with LDC Argentina S.A.: LDC Semillas S.A., Semillas del Rosario S.A.

<sup>10</sup> As discussed in the Preliminary Decision Memorandum, the Department has found the following companies to be cross-owned with Vicentin S.A.I.C.: Oleaginosa San Lorenzo S.A., Los Amores S.A.

### Verification

As provided in section 782(i)(1) of the Act, the Department intends to verify the information relied upon in making its final determination.

### Public Comment and Request for Hearing

Case briefs or other written comments may be submitted to the Assistant Secretary for Enforcement and Compliance no later than seven days after the date on which the last verification report is issued in this investigation. Rebuttal briefs, limited to issues raised in case briefs, may be submitted no later than five days after the deadline date for case briefs.<sup>11</sup> Pursuant to 19 CFR 351.309(c)(2) and (d)(2), 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.

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, the Department intends to hold the hearing at the U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230, 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.

### International Trade Commission Notification

In accordance with section 703(f) of the Act, the Department will notify the International Trade Commission (ITC) of its determination. In accordance with section 705(b)(2) of the Act, if our final determination is affirmative,<sup>12</sup> the ITC

<sup>11</sup> See 19 CFR 351.309; see also 19 CFR 351.303 (for general filing requirements).

<sup>12</sup> As of the signing of this notice, the petitioner (the National Biodiesel Fair Trade Coalition) had not requested that the date of the final determination of this investigation be aligned with the date of the final determination of the companion antidumping investigation, pursuant to section 705(a)(1) of the Act. Therefore, the current date for the final determination of this investigation is 75 days from the signature of this preliminary determination, November 6, 2017.

<sup>8</sup> With two respondents under examination, the Department normally calculates (A) a weighted average of the estimated subsidy rates calculated for the examined respondents; (B) a simple average of the estimated subsidy rates calculated for the examined respondents; and (C) a weighted average of the estimated subsidy rates calculated for the examined respondents using each company's publicly-ranged U.S. sale quantities for the merchandise under consideration. The Department then compares (B) and (C) to (A) and selects the rate closest to (A) as the most appropriate rate for all other producers and exporters. See, e.g., *Ball Bearings and Parts Thereof from France, Germany, Italy, Japan, and the United Kingdom: Final Results of Antidumping Duty Administrative Reviews, Final Results of Changed-Circumstances Review, and Revocation of an Order in Part*, 75 FR 53661, 53663 (September 1, 2010). As complete publicly ranged sales data was available, the Department based the all-others rate on the publicly ranged sales data of the mandatory respondents. For a complete analysis of the data, please see the All-Others' Rate Calculation Memorandum.

will make its final determination within 45 days after the Department makes its final determination.

#### Notification to Interested Parties

This determination is issued and published pursuant to sections 703(f) and 777(i) of the Act and 19 CFR 351.205(c).

Dated: August 21, 2017.

#### Gary Taverman

*Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, performing the non-exclusive function and duties of the Assistant Secretary for Enforcement and Compliance.*

#### Appendix I—Scope of the Investigation

The product covered by this investigation is biodiesel, which is a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, including biologically-based waste oils or greases, and other biologically-based oil or fat sources. The investigations cover biodiesel in pure form (B100) as well as fuel mixtures containing at least 99 percent biodiesel by volume (B99). For fuel mixtures containing less than 99 percent biodiesel by volume, only the biodiesel component of the mixture is covered by the scope of the investigations.

Biodiesel is generally produced to American Society for Testing and Materials International (ASTM) D6751 specifications, but it can also be made to other specifications. Biodiesel commonly has one of the following Chemical Abstracts Service (CAS) numbers, generally depending upon the feedstock used: 67784–80–9 (soybean oil methyl esters); 91051–34–2 (palm oil methyl esters); 91051–32–0 (palm kernel oil methyl esters); 73891–99–3 (rapeseed oil methyl esters); 61788–61–2 (tallow methyl esters); 68990–52–3 (vegetable oil methyl esters); 129828–16–6 (canola oil methyl esters); 67762–26–9 (unsaturated alkylcarboxylic acid methyl ester); or 68937–84–8 (fatty acids, C12–C18, methyl ester).

The B100 product subject to the investigation is currently classifiable under subheading 3826.00.1000 of the Harmonized Tariff Schedule of the United States (HTSUS), while the B99 product is currently classifiable under HTSUS subheading 3826.00.3000. Although the HTSUS subheadings, ASTM specifications, and CAS numbers are provided for convenience and customs purposes, the written description of the scope is dispositive.

#### Appendix II—List of Topics Discussed in the Preliminary Decision Memorandum

- I. Summary
- II. Background
- III. Scope Comments
- IV. Scope of the Investigation
- V. Injury Test
- VI. Preliminary Determination of Critical Circumstances
- VII. Use of Facts Otherwise Available and Adverse Facts Available
- VIII. Subsidies Valuation

- IX. Analysis of Programs
- X. Calculation of All-Others Rate
- XI. ITC Notification
- XII. Disclosure and Public Comment
- XIII. Verification
- XIV. Conclusion

[FR Doc. 2017–18166 Filed 8–25–17; 8:45 am]

**BILLING CODE 3510–DS–P**

#### DEPARTMENT OF COMMERCE

#### National Oceanic and Atmospheric Administration

#### Evaluation of National Estuarine Research Reserve

**AGENCY:** Office for Coastal Management (OCM), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

**ACTION:** Notice.

**SUMMARY:** The National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management will hold a public meeting to solicit comments for the performance evaluation of the Padilla Bay National Estuarine Research Reserve.

**DATES:** *Padilla Bay National Estuarine Research Reserve Evaluation:* The public meeting will be held on Wednesday, September 27, 2017, and written comments must be received on or before Friday, October 6, 2017.

For specific dates, times, and locations of the public meeting, see **SUPPLEMENTARY INFORMATION.**

**ADDRESSES:** You may submit comments on the reserves and coastal program NOAA intends to evaluate by any of the following methods:

*Public Meeting and Oral Comments:* A public meeting will be held in Mt. Vernon, Washington for the Padilla Bay Reserve. For the specific location, see **SUPPLEMENTARY INFORMATION.**

*Written Comments:* Please direct written comments to Ralph Cantral, Senior Advisor, NOAA Office for Coastal Management, 1305 East West Highway N/OCM1, Silver Spring, MD 20910, or via email to [Ralph.Cantral@noaa.gov](mailto:Ralph.Cantral@noaa.gov).

**FOR FURTHER INFORMATION CONTACT:** Ralph Cantral, Senior Advisor, Policy, NOAA Office for Coastal Management, 1305 East West Highway N/OCM1, Silver Spring, MD 20910, (240) 533–0729, or via email to [Ralph.Cantral@noaa.gov](mailto:Ralph.Cantral@noaa.gov). Copies of the previous evaluation findings, Management Plan, and Site Profile may be viewed and downloaded on the Internet at <http://coast.noaa.gov/czm/evaluations>. A copy of the evaluation notification letter and

most recent performance report may be obtained upon request by contacting the person identified under **FOR FURTHER INFORMATION CONTACT.**

**SUPPLEMENTARY INFORMATION:** Sections 312 and 315 of the Coastal Zone Management Act (CZMA) require NOAA to conduct periodic evaluations of federally approved national estuarine research reserves. The process includes a public meeting, consideration of written public comments and consultations with interested Federal, state, and local agencies and members of the public. For the evaluation of National Estuarine Research Reserves, NOAA will consider the extent to which the state has met the national objectives, adhered to its management plan approved by the Secretary of Commerce, and adhered to the terms of financial assistance under the Coastal Zone Management Act. When the evaluation is completed, NOAA's Office for Coastal Management will place a notice in the **Federal Register** announcing the availability of the Final Evaluation Findings.

Specific information on the periodic evaluation of reserves that are the subject of this notice are detailed below as follows:

#### Padilla Bay National Estuarine Research Reserve Evaluation

You may participate or submit oral comments at the public meeting scheduled as follows:

*Date:* September 27, 2017.

*Time:* 7:00 p.m., local time.

*Location:* Padilla Bay Reserve Interpretive Center, 10441 Bayview-Edison Road, Mt. Vernon, WA 98273.

Written comments must be received on or before October 6, 2017.

Dated: July 27, 2017.  
Federal Domestic Assistance Catalog 11.419  
Coastal Zone Management Program  
Administration

**Paul M. Scholz,**

*Deputy Director, Office for Coastal Management, National Ocean Service, National Oceanic and Atmospheric Administration.*

[FR Doc. 2017–18192 Filed 8–25–17; 8:45 am]

**BILLING CODE 3510–08–P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

RIN 0648–XF328

**Magnuson-Stevens Fishery Conservation and Management Act; General Provisions for Domestic Fisheries; Application for Exempted Fishing Permit**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; request for comments.

**SUMMARY:** The Regional Administrator, NMFS West Coast Region, has determined that twenty-seven exempted fishing permit (EFP) applications warrant further consideration; therefore, NMFS is requesting public comment on the applications. All EFP applicants request an exemption from various prohibitions under the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) to test the effects and efficacy of using deep-set buoy gear (DSBG) and linked buoy gear (LBG) to harvest swordfish and other highly migratory species (HMS) off of the U.S. West Coast. This notice also announces and requests public comment on NMFS' intent to extend a DSBG EFP.

**DATES:** Comments must be submitted in writing by September 27, 2017.

**ADDRESSES:** You may submit comments on this document, identified by NOAA–NMFS–2017–0025, by any of the following methods:

- *Electronic Submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to [www.regulations.gov/#/docketDetail;D=NOAA-NMFS-2017-0025](http://www.regulations.gov/#/docketDetail;D=NOAA-NMFS-2017-0025), click the “Comment Now!” icon, complete the required fields, and enter or attach your comments. EFP applications will be available under

Relevant Documents through the same link.

- *Mail:* Attn: Chris Fanning, NMFS West Coast Region, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802. Include the identifier “NOAA–NMFS–2017–0025” in the comments.

*Instructions:* Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on [www.regulations.gov](http://www.regulations.gov) without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous).

**FOR FURTHER INFORMATION CONTACT:** Chris Fanning, NMFS, West Coast Region, 562–980–4198.

**SUPPLEMENTARY INFORMATION:**

In 2015, the Pacific Fishery Management Council (Council) recommended that NMFS consider issuing three DSBG EFPs to target swordfish and other HMS off of the U.S. West Coast. After requesting public comment and completing required analyses, NMFS approved DSBG EFPs for the Pflieger Institute of Environmental Research (PIER), Timothy Ferguson, and Stephen Mintz for the 2015–2016 fishing seasons. Fishing activities under EFPs have yielded two years of additional data to supplement an existing five years of data from DSBG research and trials. In December 2016 and January 2017, NMFS reissued the PIER and Ferguson EFPs for a duration of two years. NMFS continues to support testing alternative gears as a means to increase domestic fishing opportunity while minimizing non-target bycatch and interactions with protected species.

At its recent meetings, the Council received additional applications for EFPs and recommended that NMFS consider issuing or reissuing EFPs to a suite of interested applicants. During its November 2016 meeting, the Council recommended that NMFS reissue Stephen Mintz' EFP for the 2017–2018 fishing seasons. At its March and June 2017 meetings, the Council recommended that NMFS consider issuing a total of twenty EFPs to authorize use of DSBG and/or LBG (see Table 1). LBG is defined as connectable segments of linked buoys floating at the ocean surface, connected to vertical lines with heavy weights allowing a horizontal line with three hooks to sink to the same depth as the terminal hook of DSBG. Additionally, seven other DSBG EFP applications were submitted for Council review, and require additional information for future consideration (see Table 2).

NMFS is requesting public comment on the twenty applications recommended for issuance by the Council as well as the seven applications that were not formally recommended by the Council at this time. If all applications were approved, the EFPs would allow up to thirty-two vessels to fish with DSBG and six vessels to fish with LBG, throughout the duration of each EFP, in the U.S. West Coast Exclusive Economic Zone (EEZ) with permitted exemption from the requirements of the HMS FMP pertaining to non-authorized gear types. Aside from the exemption described above, vessels fishing under an EFP would be subject to all other regulations implementing the HMS FMP, including measures to protect sea turtles, marine mammals, and seabirds. For up-to-date information on HMS EFPs, please visit NMFS West Coast Region's “Status of Exempted Fishing Permits” Web page ([http://www.westcoast.fisheries.noaa.gov/fisheries/migratory\\_species/status\\_exempted\\_permits.html](http://www.westcoast.fisheries.noaa.gov/fisheries/migratory_species/status_exempted_permits.html)).

TABLE 1—EFP APPLICATIONS RECOMMENDED FOR ISSUANCE BY THE PFMC

PFMC recommended EFPs		
Name	Date of council recommendation	Number of vessels
<b>Deep-Set Buoy Gear Applicants</b>		
Mintz, Stephen .....	November 2016 .....	1
Hepp, Fred .....	March 2017 .....	2
Jacobs, Kent .....	March 2017 .....	1
Kastlunger, Jordyn .....	March 2017 .....	1
Harris, Phil .....	March 2017 .....	1
Corbin, Denny .....	March 2017 .....	1
Diller, William .....	March 2017 .....	1
Cullen, Roger .....	June 2017 .....	1

TABLE 1—EFP APPLICATIONS RECOMMENDED FOR ISSUANCE BY THE PFMC—Continued

PFMC recommended EFPs		
Name	Date of council recommendation	Number of vessels
Haworth, David & Arthur Lorton	June 2017	3
Ball, Bob	June 2017	1
Ford, John	June 2017	1
Graves, Michael	June 2017	1
Kennedy, Raymond	June 2017	1
Massen, Lance	June 2017	1
Selck, Dustin	June 2017	1
Shvets, Anatolii	June 2017	2
Sidielnikov, Andrii	June 2017	1
Spinale, Paul	June 2017	1
Stephens, J & B	June 2017	2
Linked Buoy Gear Applicants		
Pfleger Institute of Environmental Research	March 2017	3
Haworth, David & Arthur Lorton	June 2017	3

TABLE 2—EFP APPLICATIONS THAT THE PFMC HAS YET TO RECOMMEND FOR ISSUANCE

Submitted EFPs		
Name	Date of submission	Number of vessels
Deep-Set Buoy Gear Applicants		
Lutoshkin, A	June 2017	1
Maassen, L	June 2017	1
Masuda, S	June 2017	1
McCarthy, M	June 2017	2
Rynkevic, R	June 2017	1
Sokolova, T	June 2017	1
Sviridov, V	June 2017	1

In March 2017, the Council also recommended that in addition to current terms and conditions on issued EFPs, NMFS also impose the following stipulations:

1. Require 100 percent observer coverage for the first ten sets of new EFP participants (a set is defined as 10 pieces of buoy gear soaked for at least eight hours). Once attained, observer coverage may be reduced to 30 percent of fishing days;
2. Prohibit vessels from being more than three nautical miles from any piece of gear;
3. Require proper maintenance of configured gear in accordance with their EFP; and
4. Require each piece of DSBG and the terminal ends of LBG to be marked with a radar reflector and flag, and require buoys to be marked with the fishing vessel's official number.

NMFS considers the Council's recommendations for additional conditions to apply to all issued and proposed DSBG and LBG EFPs. NMFS is also requesting public comment on the Council's recommendations for

additional terms and conditions for the requested EFPs.

NMFS will consider all public comments submitted in response to this **Federal Register** Notice prior to issuance of any EFP mentioned within this Notice. Additionally, NMFS will analyze the effects of issuing EFPs in accordance with the National Environmental Policy Act and NOAA's Administrative Order 216-6, as well as ensure compliance with other applicable laws, including Section 7(a)(2) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), which requires the agency to insure that the proposed action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

**Authority:** 16 U.S.C. 1801 *et seq.*

Dated: August 23, 2017.

**Margo B. Schulze-Haugen,**  
*Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.*  
 [FR Doc. 2017-18146 Filed 8-25-17; 8:45 am]

**BILLING CODE 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**National Estuarine Research Reserve System**

**AGENCY:** Office for Coastal Management, National Ocean Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

**ACTION:** Notice of Public Comment Period for the Jobs Bay National Estuarine Research Reserve Management Plan revision.

Notice is hereby given that the Office for Coastal Management, National Ocean Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce is announcing a thirty-day public comment period for the Jobs Bay National Estuarine Research Reserve Management Plan revision. Pursuant to 15 CFR Section 921.33(c), the revised plan will bring the reserve into compliance. The Jobs Bay

Reserve revised plan will replace the plan approved in 2000.

The revised management plan outlines the administrative structure; the research/monitoring, stewardship, education, and training programs and priorities of the reserve; plans for a proposed boundary expansion through future land acquisition; and facility development priorities to support reserve operations.

The Jobos Bay Reserve takes an integrated approach to management, linking research and education, coastal training, and stewardship functions. The Puerto Rico Department of Natural and Environmental Resources (PRDNER) has outlined how it will administer the reserve and its core programs by providing detailed actions that will enable it to accomplish specific goals and objectives. Since the last management plan, the reserve has: Developed core programs; expanded monitoring programs within Jobos Bay and its watershed; expanded its dorm, and remodeled the historic train depot and visitor center; conducted training workshops; implemented K-12 education programs; and built new and innovative partnerships with local, Commonwealth, and U.S. organizations and universities.

The total number of acres within the boundary is 2800 acres, which is a slight modification of the original 2883 acres identified in the previous management plan. The revised acreage is a result of survey contracted by the PRDNER to clarify the boundary. The revised management plan will serve as the guiding document for the Jobos Bay Reserve for the next five years.

View the Jobos Bay Reserve Management Plan revision at (<http://drna.pr.gov/jbnerr/>) and provide comments to the Reserve's Manager, Aitza Pabon ([apabon@drna.pr.gov](mailto:apabon@drna.pr.gov)).

**FOR FURTHER INFORMATION CONTACT:** Nina Garfield at (240) 533-0817 or Erica Seiden at (240) 533-0781 of NOAA's Office for Coastal Management, 1305 East-West Highway, N/ORM5, 10th floor, Silver Spring, MD 20910.

Dated: August 21, 2017.

**Paul M. Scholz,**

*Deputy Director, Office for Coastal Management, National Ocean Service, National Oceanic and Atmospheric Administration.*

[FR Doc. 2017-18193 Filed 8-25-17; 8:45 am]

**BILLING CODE 3510-08-P**

## DEPARTMENT OF DEFENSE

### Office of the Secretary

[Transmittal No. 17-38]

### 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:** Pamela Young, (703) 697-9107 or Kathy Valadez, (703) 697-9217; DSCA/DSA-RAN.

**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 17-38 with attached Policy Justification and Sensitivity of Technology.

Dated: August 23, 2017.

**Aaron Siegel,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

**BILLING CODE 5001-06-P**



DEFENSE SECURITY COOPERATION AGENCY  
201 12TH STREET SOUTH, STE 203  
ARLINGTON, VA 22202-5408

AUG 02 2017

The Honorable Paul D. Ryan  
Speaker of the House  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 17-38, concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of Australia for defense articles and services estimated to cost \$108.7 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,

  
Gregory M. Kausner  
Acting Director

Enclosures:

- 1. Transmittal
- 2. Policy Justification
- 3. Sensitivity of Technology



**BILLING CODE 5001-06-C**

Transmittal No. 17-38

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 Australia

(ii) *Total Estimated Value:*

Major Defense Equip- ment * .....	\$ 0.0 million
Other .....	\$108.7 million
<b>TOTAL .....</b>	<b>\$108.7 million</b>

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:*

*Major Defense Equipment (MDE):*  
None

*Non-MDE includes:* One thousand nine hundred fifty-two (1,952) ALE-70(V)/T-1687A Electronic Towed Decoy Countermeasures, publications and technical documentation, other technical assistance, U.S. Government and contractor engineering, technical and logistics support services, and other related elements of logistical and program support.

(iv) *Military Department:* Navy (XX-P-AMN A1)

(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:* August 2, 2017

\* As defined in Section 47(6) of the Arms Export Control Act.

**POLICY JUSTIFICATION***Australia—ALE-70 Radio Frequency Countermeasures (RFCM)*

The Government of Australia has requested the possible sale of one thousand nine hundred fifty-two (1,952) ALE-70(V)/T-1687A Electronic Towed Decoy Countermeasures, publications and technical documentation, other technical assistance, U.S. Government and contractor engineering, technical and logistics support services, and other related elements of logistical and program support. The total estimated program cost is \$108.7 million.

This sale will contribute to the foreign policy and national security of the United States by helping to improve the security of a major non-NATO ally and continues to be an important force for political stability, security, and economic development in the Western Pacific. It is vital to the U.S. national interest to assist our ally in developing and maintaining a strong and ready self-defense capability.

The proposed sale will improve Australia's F-35 survivability and will enhance its capability to deter global threats, strengthen its homeland defense, and cooperate in coalition defense initiatives. Australia 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 British Aerospace Enterprise (BAE), Nashua, NH. There are no offsets 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 Australia.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 17-38

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 ALE-70 is a towed radio frequency countermeasure designed for deployment from the F-35 aircraft and is comprised of electronic and mechanical sub-assemblies to accomplish the intended purpose. The ALE-70 consists of three major components: the reel/launcher assembly, the tow line, and the T-1687 countermeasure transmitter. Upon deployment from the aircraft, the countermeasure transmitter is reeled out to a prescribed distance, held in tow behind the jet by the tow line and emits waveforms in response to commands from the countermeasure controller located in the jet. The waveforms are utilized to confuse or decoy adversary radars or radar guided weapons. Designed and produced by BAE Systems of Nashua, New Hampshire, the ALE-70 employs amplifiers based on Gallium Nitride (GaN) technology to meet stringent output requirements.

2. The ALE-70 generates, amplifies, and transmits signals in response to commands from the countermeasures controller which remains aboard the jet. Neither the countermeasure transmitter nor the reel/launcher assembly contains stored information or software representing critical program information. As the ALE-70 contains no software or stored waveforms/techniques, Anti-Tampering security measures are not required. ALE-70 hardware is classified SECRET to protect specific data elements associated with the performance of the countermeasure.

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 or

equivalent system which might reduce system effectiveness or be used in the development of a system with similar or advanced capabilities.

4. A determination has been made that Australia 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 Australia.

[FR Doc. 2017-18177 Filed 8-25-17; 8:45 am]

**BILLING CODE 5001-06-P**

**DEPARTMENT OF DEFENSE****Office of the Secretary**

[Transmittal No. 17-29]

**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:** Pamela Young, (703) 697-9107 or Kathy Valadez, (703) 697-9217; DSCA/DSA-RAN.

**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 17-29 with attached Policy Justification.

Dated: August 23, 2017.

**Aaron Siegel,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

**BILLING CODE 5001-06-P**



DEFENSE SECURITY COOPERATION AGENCY  
201 12TH STREET SOUTH, STE 203  
ARLINGTON, VA 22202-5408

The Honorable Paul D. Ryan  
Speaker of the House  
U.S. House of Representatives  
Washington, DC 20515

AUG 01 2017

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 17-29, concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of the Republic of Iraq for defense articles and services estimated to cost \$150 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,

Gregory M. Kausner  
Acting Director

Enclosures:

- 1. Transmittal
- 2. Policy Justification
- 3. Regional Balance (Classified document provided under separate cover)



BILLING CODE 5001-06-C

Transmittal No. 17-29

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:* The Republic of Iraq

(ii) *Total Estimated Value:*

Major Defense Equipment *	\$ 0 million
Other .....	150 million
<b>TOTAL .....</b>	<b>150 million</b>

(iii) *Description and Quantity or Quantities of Articles or Services Under Consideration for Purchase:*

*Non-MDE:* Follow-On Technical Support (FOTS) for various U.S.-origin navy vessels and a ship repair facility in Iraq to include procurement of spare and repair parts, support and test equipment, publications and technical documentation, personnel training equipment, engineering and logistics support services and other related elements of logistics and program support.

(iv) *Military Department:* Navy (XX-P-GAS)

(v) *Prior Related Cases, if any:* GAL, 20 May 14; GAM, 20 May 14; GAO, 3 Nov 16

(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:* August 1, 2017

\* as defined in Section 47(6) of the Arms Export Control Act.

**POLICY JUSTIFICATION***Republic of Iraq—Follow-On Technical Support (FOTS) for U.S. Origin Navy Vessels and a Ship Repair Facility*

The Government of Iraq has requested a possible sale of Follow-On Technical Support (FOTS) for various U.S.-origin navy vessels and a ship repair facility in Iraq to include procurement of spare and repair parts, support and test equipment, publications and technical documentation, personnel training equipment, engineering and logistics support services, and other related elements of logistics and program support. The estimated total program value is \$150 million.

The proposed sale will contribute to the foreign policy and national security of the United States by helping to provide for a stable, sovereign, and democratic Iraq, capable of combating terrorism and protecting its people and sovereignty.

Iraq intends to use this maintenance support to ensure the Navy is fully-operationally capable of providing coastal defense and security. The various vessels to be supported are: Patrol boats, offshore support vessels, fast assault boats, and Rigid Hull Inflatable Boats. The proposed sale of

Follow-On Technical Support will increase the Iraq Navy's material and operational readiness. Iraq will have no difficulty absorbing this support into its armed forces.

The proposed sale of this support will not alter the basic military balance in the region.

The prime contractor will be Swiftships, LLC, Morgan City, LA. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require annual trips to Iraq and in-country presence involving U.S. Government and contractor representatives for technical reviews, support and oversight for approximately three years.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2017-18148 Filed 8-25-17; 8:45 am]

**BILLING CODE 5001-06-P**

**DEPARTMENT OF DEFENSE****Office of the Secretary**

[Transmittal No. 16-55]

**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:** Pamela Young, (703) 697-9107 or Kathy Valadez, (703) 697-9217; DSCA/DSA-RAN.

**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 16-55 with attached Policy Justification and Sensitivity of Technology.

Dated: August 23, 2017.

**Aaron Siegel,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

**BILLING CODE 5001-06-P**



DEFENSE SECURITY COOPERATION AGENCY  
201 12TH STREET SOUTH, STE 203  
ARLINGTON, VA 22202-5408

The Honorable Paul D. Ryan  
Speaker of the House  
U.S. House of Representatives  
Washington, DC 20515

AUG 02 2017

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 16-55, concerning the Department of the Air Force's proposed Letter of Offer(s) and Acceptance to the Federal Republic of Nigeria for defense articles and services estimated to cost \$593 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,

Gregory M. Kausner  
Acting Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology



**BILLING CODE 5001-06-C**

Transmittal No. 16-55

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:* The Federal Republic of Nigeria

(ii) *Total Estimated Value:*

Major Defense Equipment *	\$ 29 million
Other .....	\$564 million
<b>TOTAL .....</b>	<b>\$593 million</b>

(iii) *Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:*

*Major Defense Equipment (MDE):*

One hundred (100) GBU-12 (500lb) Paveway II (PW-II) Tailkits

One hundred (100) GBU-58 (250lb) PW-II Tailkits

Four hundred (400) Laser Guided Rockets including Advanced Precision Kill Weapon System (APKWS)

Two thousand (2,000) MK-81 (250lb) bombs

Five thousand (5,000) 2.75 inch Hydra 70 Unguided Rockets (70mm rockets)  
One thousand (1,000) 2.75 inch Hydra 70 Unguided Rockets (practice)  
Twenty thousand (20,000) Rounds, .50 Caliber Machine Gun Ammo

*Non-Major Defense Equipment (MDE):*

This request also includes the following Non-MDE: Twelve (12) A-29 Super Tucano aircraft, seven (7) AN/AAQ-22F Electro-Optical/Infrared (EO/IR) Sensor and Laser Designators, Initial Spares, Readiness Spares Package, Consumables, Support Equipment, Technical Data, Repair and Return

Support, Facilities infrastructure and hangar construction, Night Vision Devices (NVDs), Contract Logistics Services (CLS), Contractor Provided Familiarization and Training, USG Manpower and Services, Field Service Representatives, Training Services (pilot training, USAF training, early A-29 training, flight leader upgrade training, travel and living allowance, maintenance training, specialized training, computer-based training, night vision device training, human rights and international humanitarian law, and munitions training), Training Simulators, Air Worthiness Support, Forward Operating Base Facilities, Forward Operating Location Support, Ferrying, and Non-recurring Engineering. Additionally, all aircraft will include weapons software to support forward looking infrared sensors (FLIRs), ancillary system.

(iv) *Military Department: Air Force (X8-D-SAB)*

(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 Annex attached.*

(viii) *Date Report Delivered to Congress: August 2, 2017*

\* As defined in Section 47(6) of the Arms Export Control Act.

#### **POLICY JUSTIFICATION**

##### *Nigeria—A-29 Super Tucano Aircraft, Weapons and Associated Support*

The Government of Nigeria requests twelve (12) A-29 Super Tucano aircraft and weapons, including all associated training, spare parts, aviation and ground support equipment, and hangar, facilities, and infrastructure required to support the program. The estimated total case value is \$593 million.

These aircraft will support Nigerian military operations against terrorist organization Boko Haram and to counter illicit trafficking in Nigeria and the Gulf of Guinea. The Super Tucano is a sustainable platform for counterterrorism, counter insurgency, border surveillance, and illicit trade interdiction operations. The proposed sale will support U.S. foreign policy objectives by helping Nigeria to meet shared counterterrorism objectives for the region. This proposed sale will strengthen the U.S. security relationship with Africa's largest democracy. Nigeria will have no difficulty absorbing these aircraft into its armed forces.

The proposed sale of this equipment and support does not alter the basic military balance in the region.

The prime contractor is the Sierra Nevada Corporation, headquartered in Centennial, Colorado. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require the assignment of U.S. Government or contractor representatives to Nigeria for mobile training teams and contract logistic support.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 16-55

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. This sale involves the release of sensitive weapons software technology information to Nigeria. Software associated with the following weapons will be included in the aircraft operational flight program to support a future weapons capability.

2. Sensitive and/or classified (up to SECRET) elements of the proposed A-29 sale to Nigeria includes the hardware and associated software with: Advanced Precision Kill Weapon System (APKWS) laser guided rockets, Guided Bomb Unit (GBU)-12/58 Paveway II laser guided tail kits, and Mark (MK)-81/82 general purpose bombs.

3. The Hydra 70 Rocket System is a modernized version of the 2.75 inch (70 mm) unguided rocket body with the MK66 Rocket Motor.

4. The APKWS is a low cost semi-active laser guidance kit developed by BAE Systems which is added to current unguided 70 mm rocket motors and warheads similar to and including the Hydra 70 rocket. It is a low collateral damage weapon that can effectively strike both soft and lightly armored targets. APKWS turns a standard unguided 2.75 inch (70 mm) rocket into a precision laser-guided rocket, classification up to SECRET.

5. GBU-12/58 Paveway II (PW-II) Tailkits: 500-lb (GBU-12) and 250-lb (GBU-58) are laser-guided ballistic bombs (LGBs) developed by Raytheon and Lockheed Martin. The LGB is a maneuverable, free-fall weapon that guides to a spot of laser energy reflected off of the target. The LGB is delivered like a normal general purpose (GP) warhead and the semi-active guidance corrects for many of the normal errors inherent in any delivery system. Laser designation for the weapon can be provided by a variety of laser target

markers or designators. The tailkit consists of a laser guidance kit, a computer control group (CCG) and a warhead specific Air Foil Group (AFG), that attach to the nose and tail of MK 81 and MK 82 General Purpose (GP) bomb bodies to create an LGB. This sale includes the tailkits to transform Nigeria's existing 500-lb and 250-lb GP bomb bodies into GBU-12s and GBU-58s respectively. Nigeria is also buying additional GBU-58s, 250-lb (MK-81) guided bombs. The overall weapon is CONFIDENTIAL.

6. AN/AAQ-22F Brite Star Electro-Optical/Infrared (EO/IR) Multi-Sensor Targeting System developed by FLIR. The system is a five field-of-view (FOV) large format thermal imager, three FOV color daylight camera with laser designator for terminal guidance of LGBs and IR-guided rockets. The system is classified as UNCLASSIFIED.

7. This sale is necessary in furtherance of U.S. foreign policy and national security objectives outlined in the Policy Justification. Moreover, the benefits to be derived from this sale, as outlined in the Policy Justification, outweigh the potential damage that could result if the sensitive technology were revealed to unauthorized persons.

8. All defense articles and services listed in this transmittal are authorized for release and export to the Government of Nigeria.

[FR Doc. 2017-18201 Filed 8-25-17; 8:45 am]

**BILLING CODE 5001-06-C**

## **DEPARTMENT OF DEFENSE**

### **Office of the Secretary**

[Transmittal No. 17-32]

#### **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:** Pamela Young, (703) 697-9107 or Kathy Valadez, (703) 697-9217; DSCA/DSA-RAN.

**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 17-32 with attached Policy Justification and Sensitivity of Technology.

Dated: August 23, 2017.

Aaron Siegel,  
Alternate OSD Federal Register Liaison  
Officer, Department of Defense.

BILLING CODE 5001-06-P



DEFENSE SECURITY COOPERATION AGENCY  
201 12TH STREET SOUTH, STE 203  
ARLINGTON, VA 22202-5408

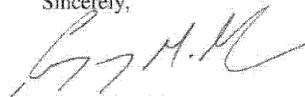
AUG 09 2017

The Honorable Paul D. Ryan  
Speaker of the House  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 17-32, concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of Thailand for defense articles and services estimated to cost \$24.9 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,

  
Charles W. Hooper  
Lieutenant General, USA  
Director

Enclosures:

- 1. Transmittal
- 2. Policy Justification
- 3. Sensitivity of Technology



BILLING CODE 5001-06-C

Transmittal No. 17-32

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: The Government of Thailand

(ii) Total Estimated Value:

Major Defense Equipment *	\$23.2 million
Other .....	\$ 1.7 million
Total .....	\$24.9 million

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):

- Five (5) RGM-84L Harpoon Block II Surface Launched Missiles
- One (1) RTM-84L Harpoon Block II Exercise Missile

Non-MDE includes: Also included are containers, spare and repair parts, support and test equipment,

publications and technical documentation, personnel training and training equipment, U.S. Government and contractor representatives technical assistance, engineering and logistics support services, and other related elements of logistics and program support.

(iv) *Military Department: Navy (XX-P-AKR)*

(v) *Prior Related Cases, if any: TH-P-AKP*

(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: August 9, 2017*

\*As defined in Section 47(6) of the Arms Export Control Act.

#### POLICY JUSTIFICATION

##### *Government of Thailand—RGM-84L Harpoon Surface Launched Block II Missiles*

The Government of Thailand has requested the possible sale of up to five (5) RGM-84L Harpoon Block II Surface Launched Missiles and one (1) RTM-84L Harpoon Block II Exercise Missile. Also included are containers, spare and repair parts, support and test equipment, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor representatives technical assistance, engineering and logistics support services, and other related elements of logistics and program support. The estimated cost is \$24.9 million.

This proposed sale will contribute to the foreign policy and national security of the United States by helping to strengthen the U.S.-Thai strategic relationship and to improve the security of an important partner.

The proposed sale will provide enhanced capabilities in effective defense of critical sea lines. Thailand intends to use the missiles on its DW3000 Class Frigate. The proposed sale of the Harpoon Block II missiles and support will increase the Royal Thai Navy's maritime partnership potential. Thailand has purchased Harpoon missiles previously and will have no difficulty absorbing these missiles into its armed forces.

The proposed sale will not alter the basic military balance in the region.

The principal contractor will be the Boeing Company, St. Louis, MO. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require annual trips to Thailand involving U.S. Government personnel 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.

Transmittal No. 17-32

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 RGM-84L Harpoon Surface Launched Block II missile system, to include publications, documentation, operations, supply, maintenance, and training to be conveyed with this proposed sale have the highest classification level of CONFIDENTIAL. The Harpoon Block II missile is a non-nuclear tactical weapon system currently in service in the U.S. Navy and in 29 other foreign nations. It provides a day, night, and adverse weather, standoff surface-to-surface capability and is an effective Anti-Surface Warfare missile. The RGM-84L incorporates components, software, and technical design information that are considered sensitive.

2. The following components being conveyed by the proposed sale are considered sensitive and are classified CONFIDENTIAL:

- a. The Radar Seeker
- b. The GPS/INS System
- c. Operational Flight Program Software

d. Missile operational characteristics and performance data

These elements are essential for the Harpoon Block II missile to selectively engage hostile targets under a wide range of operational, tactical and environmental conditions. With respect to GPS, Thailand has been approved for Precision Positioning Service (PPS).

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 or equivalent systems which 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 Government of Thailand can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This proposed sale is necessary to the furtherance of the U.S. foreign policy

and national security objectives outlined in the Policy Justification. Moreover, the benefits to be derived from this sale, as outlined in the Policy Justification, outweigh the potential damage that could result if the sensitive technology were revealed to unauthorized persons.

5. All defense articles and services listed in this transmittal are authorized for release and export to the Government of Thailand.

[FR Doc. 2017-18191 Filed 8-25-17; 8:45 am]

BILLING CODE 5001-06-P

## DEPARTMENT OF ENERGY

### Federal Energy Regulatory Commission

#### Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

##### Filings Instituting Proceedings

*Docket Number:* PR17-57-000.

*Applicants:* Houston Pipe Line Company LP.

*Description:* Tariff filing per 284.123(b),(e)+(g): Rate Election of Houston Pipe Line Company LP Effective November 1, 2017; Filing Type: 1300.

*Filed Date:* 8/16/17.

*Accession Number:* 201708165058.

*Comments Due:* 5 p.m. ET 9/6/17.

*284.123(g) Protests Due:* 5 p.m. ET 10/16/17.

*Docket Numbers:* RP10-900-000.

*Applicants:* Dominion Transmission, Inc.

*Description:* Report Filing: DETI—Informational Fuel Report—2017.

*Filed Date:* 6/30/17.

*Accession Number:* 20170630-5330.

*Comments Due:* 5 p.m. ET 8/23/17.

*Docket Numbers:* RP17-962-000.

*Applicants:* Cameron Interstate Pipeline, LLC.

*Description:* Filing Withdrawal: Withdrawal of Tenaska Capacity Release Umbrella Agreement.

*Filed Date:* 8/16/17.

*Accession Number:* 20170816-5113.

*Comments Due:* 5 p.m. ET 8/28/17.

The filings are accessible in the Commission's eLibrary system by clicking on the links or 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 date(s). 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: August 17, 2017.

**Nathaniel J. Davis, Sr.,**

*Deputy Secretary.*

[FR Doc. 2017-18150 Filed 8-25-17; 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:* ER11-3576-014; ER11-3401-013.

*Applicants:* Golden Spread Electric Cooperative, Inc., Golden Spread Panhandle Wind Ranch, LLC.

*Description:* Supplement to June 29, 2017 Notice of Non-material Change in Status of Golden Spread Electric Cooperative, Inc.

*Filed Date:* 8/22/17.

*Accession Number:* 20170822-5042.

*Comments Due:* 5 p.m. ET 9/12/17.

*Docket Numbers:* ER16-1766-001.

*Applicants:* Midcontinent

Independent System Operator, Inc.

*Description:* Compliance filing: 2017-08-21 Amended RSG Compliance filing to be effective 4/1/2011.

*Filed Date:* 8/21/17.

*Accession Number:* 20170821-5137.

*Comments Due:* 5 p.m. ET 9/11/17.

*Docket Numbers:* ER16-2225-001.

*Applicants:* Midcontinent

Independent System Operator, Inc.

*Description:* Compliance filing: 2017-08-21 Compliance to RSG Rehearing Filing to be effective 8/21/2017.

*Filed Date:* 8/21/17.

*Accession Number:* 20170821-5149.

*Comments Due:* 5 p.m. ET 9/11/17.

*Docket Numbers:* ER16-2355-001.

*Applicants:* Midcontinent

Independent System Operator, Inc.

*Description:* Compliance filing: 2017-08-21 Amended RSG Exemptions Compliance filing to be effective 8/31/2010.

*Filed Date:* 8/21/17.

*Accession Number:* 20170821-5132.

*Comments Due:* 5 p.m. ET 9/11/17.

*Docket Numbers:* ER17-1913-000.

*Applicants:* Entergy Nuclear FitzPatrick, LLC.

*Description:* Errata to June 27, 2017 Entergy Nuclear FitzPatrick, LLC tariff filing (Requesting Administrative Cancellation of Tariff).

*Filed Date:* 8/10/17.

*Accession Number:* 20170810-5144.

*Comments Due:* 5 p.m. ET 8/31/17.

*Docket Numbers:* ER17-2197-001.

*Applicants:* Nevada Power Company.

*Description:* Tariff Amendment: Rate Schedule No. 155 NPC/CRC Agreement Executed to be effective 10/1/2017.

*Filed Date:* 8/22/17.

*Accession Number:* 20170822-5082.

*Comments Due:* 5 p.m. ET 9/12/17.

*Docket Numbers:* ER17-2340-000.

*Applicants:* Golden Hills North Wind, LLC.

*Description:* Baseline eTariff Filing: Golden Hills North Wind, LLC Application for Market-Based Rates to be effective 9/15/2017.

*Filed Date:* 8/21/17.

*Accession Number:* 20170821-5129.

*Comments Due:* 5 p.m. ET 9/11/17.

*Docket Numbers:* ER17-2341-000.

*Applicants:* CA Flats Solar 130, LLC.

*Description:* Baseline eTariff Filing: CA Flats Solar 130, LLC MBR Tariff to be effective 8/22/2017.

*Filed Date:* 8/21/17.

*Accession Number:* 20170821-5134.

*Comments Due:* 5 p.m. ET 9/11/17.

The filings are accessible in the Commission's eLibrary system by clicking on the links or 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: August 22, 2017.

**Nathaniel J. Davis, Sr.,**

*Deputy Secretary.*

[FR Doc. 2017-18149 Filed 8-25-17; 8:45 am]

**BILLING CODE 6717-01-P**

## FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060-0888]

### Information Collection Being Reviewed by the Federal Communications Commission

**AGENCY:** Federal Communications Commission.

**ACTION:** Notice and request for comments.

**SUMMARY:** As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act of 1995 (PRA), the Federal Communications Commission (FCC or Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and ways to further reduce the information collection burden on small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid OMB control number.

**DATES:** Written comments should be submitted on or before October 27, 2017. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contacts below as soon as possible.

**ADDRESSES:** Direct all PRA comments to Cathy Williams, FCC, via email: [PRA@fcc.gov](mailto:PRA@fcc.gov) and to [Cathy.Williams@fcc.gov](mailto:Cathy.Williams@fcc.gov).

**FOR FURTHER INFORMATION CONTACT:** For additional information about the information collection, contact Cathy Williams at (202) 418-2918.

**SUPPLEMENTARY INFORMATION:** As part of its continuing effort to reduce paperwork burdens, and as required by the PRA, 44 U.S.C. 3501-3520, the FCC

invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and ways to further reduce the information collection burden on small business concerns with fewer than 25 employees.

*OMB Control Number:* 3060-0888.

*Title:* Section 1.221, Notice of hearing; appearances; Section 1.229 Motions to enlarge, change, or delete issues; Section 1.248 Prehearing conferences; hearing conferences; Section 76.7, Petition Procedures; Section 76.9, Confidentiality of Proprietary Information; Section 76.61, Dispute Concerning Carriage; Section 76.914, Revocation of Certification; Section 76.1001, Unfair Practices; Section 76.1003, Program Access Proceedings; Section 76.1302, Carriage Agreement Proceedings; Section 76.1513, Open Video Dispute Resolution.

*Form Number:* Not applicable.

*Type of Review:* Extension of a currently approved collection.

*Respondents:* Businesses or other for-profit.

*Number of Respondents and Responses:* 684 respondents; 684 responses.

*Estimated Time per Response:* 6.4 to 95.4 hours.

*Frequency of Response:* On occasion reporting requirement; Third party disclosure requirement.

*Obligation to Respond:* Required to obtain or retain benefits. The statutory authority for this collection of information is contained in 47 U.S.C. 154(i) and (j), 303(r), 338, 340, 534, 535, 536, 543, 548 and 573.

*Total Annual Burden:* 34,816 hours.

*Total Annual Cost:* \$3,671,370.

*Privacy Act Impact Assessment:* No impact(s).

*Nature and Extent of Confidentiality:* A party that wishes to have confidentiality for proprietary information with respect to a submission it is making to the Commission must file a petition pursuant to the pleading requirements in Section 76.7 and use the method

described in Sections 0.459 and 76.9 to demonstrate that confidentiality is warranted.

*Needs and Uses:* Commission rules specify pleading and other procedural requirements for parties filing petitions or complaints under Part 76 of the Commission's rules, including petitions for special relief, cable carriage complaints, program access complaints, and program carriage complaints. Therefore, the information collection requirements contained in this collection are as follows:

47 CFR 1.221(h) requires that, in a program carriage complaint proceeding filed pursuant to § 76.1302 that the Chief, Media Bureau refers to an administrative law judge for an initial decision, each party, in person or by attorney, shall file a written appearance within five calendar days after the party informs the Chief Administrative Law Judge that it elects not to pursue alternative dispute resolution pursuant to § 76.7(g)(2) or, if the parties have mutually elected to pursue alternative dispute resolution pursuant to § 76.7(g)(2), within five calendar days after the parties inform the Chief Administrative Law Judge that they have failed to resolve their dispute through alternative dispute resolution. The written appearance shall state that the party will appear on the date fixed for hearing and present evidence on the issues specified in the hearing designation order.

47 CFR 1.229(b)(2) requires that, in a program carriage complaint proceeding filed pursuant to § 76.1302 that the Chief, Media Bureau refers to an administrative law judge for an initial decision, a motion to enlarge, change, or delete issues shall be filed within 15 calendar days after the deadline for submitting written appearances pursuant to § 1.221(h), except that persons not named as parties to the proceeding in the designation order may file such motions with their petitions to intervene up to 30 days after publication of the full text or a summary of the designation order in the **Federal Register**.

47 CFR 1.229(b)(3) provides that any person desiring to file a motion to modify the issues after the expiration of periods specified in paragraphs (a), (b)(1), and (b)(2) of § 1.229, shall set forth the reason why it was not possible to file the motion within the prescribed period.

47 CFR 1.248(a) provides that the initial prehearing conference as directed by the Commission shall be scheduled 30 days after the effective date of the order designating a case for hearing, unless good cause is shown for

scheduling such conference at a later date, except that for program carriage complaints filed pursuant to § 76.1302 that the Chief, Media Bureau refers to an administrative law judge for an initial decision, the initial prehearing conference shall be held no later than 10 calendar days after the deadline for submitting written appearances pursuant to § 1.221(h) or within such shorter or longer period as the Commission may allow on motion or notice consistent with the public interest.

47 CFR 1.248(b) provides that the initial prehearing conference as directed by the presiding officer shall be scheduled 30 days after the effective date of the order designating a case for hearing, unless good cause is shown for scheduling such conference at a later date, except that for program carriage complaints filed pursuant to § 76.1302 that the Chief, Media Bureau refers to an administrative law judge for an initial decision, the initial prehearing conference shall be held no later than 10 calendar days after the deadline for submitting written appearances pursuant to § 1.221(h) or within such shorter or longer period as the presiding officer may allow on motion or notice consistent with the public interest.

47 CFR 76.7. Pleadings seeking to initiate FCC action must adhere to the requirements of Section 76.6 (general pleading requirements) and Section 76.7 (initiating pleading requirements). Section 76.7 is used for numerous types of petitions and special relief petitions, including general petitions seeking special relief, waivers, enforcement, show cause, forfeiture and declaratory ruling procedures.

47 CFR 76.7(g)(2) provides that, in a proceeding initiated pursuant to § 76.7 that is referred to an administrative law judge, the parties may elect to resolve the dispute through alternative dispute resolution procedures, or may proceed with an adjudicatory hearing, provided that the election shall be submitted in writing to the Commission and the Chief Administrative Law Judge.

47 CFR 76.9. A party that wishes to have confidentiality for proprietary information with respect to a submission it is making to the FCC must file a petition pursuant to the pleading requirements in Section 76.7 and use the method described in Sections 0.459 and 76.9 to demonstrate that confidentiality is warranted. The petitions filed pursuant to this provision are contained in the existing information collection requirement and are not changed by the rule changes.

47 CFR 76.61(a) permits a local commercial television station or

qualified low power television station that is denied carriage or channel positioning or repositioning in accordance with the must-carry rules by a cable operator to file a complaint with the FCC in accordance with the procedures set forth in Section 76.7. Section 76.61(b) permits a qualified local noncommercial educational television station that believes a cable operator has failed to comply with the FCC's signal carriage or channel positioning requirements (Sections 76.56 through 76.57) to file a complaint with the FCC in accordance with the procedures set forth in Section 76.7.

47 CFR 76.61(a)(1) states that whenever a local commercial television station or a qualified low power television station believes that a cable operator has failed to meet its carriage or channel positioning obligations, pursuant to Sections 76.56 and 76.57, such station shall notify the operator, in writing, of the alleged failure and identify its reasons for believing that the cable operator is obligated to carry the signal of such station or position such signal on a particular channel.

47 CFR 76.61(a)(2) states that the cable operator shall, within 30 days of receipt of such written notification, respond in writing to such notification and either commence to carry the signal of such station in accordance with the terms requested or state its reasons for believing that it is not obligated to carry such signal or is in compliance with the channel positioning and repositioning and other requirements of the must-carry rules. If a refusal for carriage is based on the station's distance from the cable system's principal headend, the operator's response shall include the location of such headend. If a cable operator denies carriage on the basis of the failure of the station to deliver a good quality signal at the cable system's principal headend, the cable operator must provide a list of equipment used to make the measurements, the point of measurement and a list and detailed description of the reception and over-the-air signal processing equipment used, including sketches such as block diagrams and a description of the methodology used for processing the signal at issue, in its response.

47 CFR 76.914(c) permits a cable operator seeking revocation of a franchising authority's certification to file a petition with the FCC in accordance with the procedures set forth in Section 76.7.

47 CFR 76.1003(a) permits any multichannel video programming distributor (MVPD) aggrieved by conduct that it believes constitute a violation of the FCC's competitive

access to cable programming rules to commence an adjudicatory proceeding at the FCC to obtain enforcement of the rules through the filing of a complaint, which must be filed and responded to in accordance with the procedures specified in Section 76.7, except to the extent such procedures are modified by Section 76.1003.

47 CFR 76.1001(b)(2) permits any multichannel video programming distributor to commence an adjudicatory proceeding by filing a complaint with the Commission alleging that a cable operator, a satellite cable programming vendor in which a cable operator has an attributable interest, or a satellite broadcast programming vendor, has engaged in an unfair act involving terrestrially delivered, cable-affiliated programming, which must be filed and responded to in accordance with the procedures specified in § 76.7, except to the extent such procedures are modified by §§ 76.1001(b)(2) and 76.1003. In program access cases involving terrestrially delivered, cable-affiliated programming, the defendant has 45 days from the date of service of the complaint to file an answer, unless otherwise directed by the Commission. A complainant shall have the burden of proof that the defendant's alleged conduct has the purpose or effect of hindering significantly or preventing the complainant from providing satellite cable programming or satellite broadcast programming to subscribers or consumers; an answer to such a complaint shall set forth the defendant's reasons to support a finding that the complainant has not carried this burden. In addition, a complainant alleging that a terrestrial cable programming vendor has engaged in discrimination shall have the burden of proof that the terrestrial cable programming vendor is wholly owned by, controlled by, or under common control with a cable operator or cable operators, satellite cable programming vendor or vendors in which a cable operator has an attributable interest, or satellite broadcast programming vendor or vendors; an answer to such a complaint shall set forth the defendant's reasons to support a finding that the complainant has not carried this burden.

47 CFR 76.1003(b) requires any aggrieved MVPD intending to file a complaint under this section to first notify the potential defendant cable operator, and/or the potential defendant satellite cable programming vendor or satellite broadcast programming vendor, that it intends to file a complaint with the Commission based on actions alleged to violate one or more of the

provisions contained in Sections 76.1001 or 76.1002 of this part. The notice must be sufficiently detailed so that its recipient(s) can determine the nature of the potential complaint. The potential complainant must allow a minimum of ten (10) days for the potential defendant(s) to respond before filing a complaint with the Commission.

47 CFR 76.1003(c) describes the required contents of a program access complaint, in addition to the requirements of Section 76.7 of this part.

47 CFR 76.1003(c)(3) requires a program access complaint to contain evidence that the complainant competes with the defendant cable operator, or with a multichannel video programming distributor that is a customer of the defendant satellite cable programming or satellite broadcast programming vendor or a terrestrial cable programming vendor alleged to have engaged in conduct described in § 76.1001(b)(1).

47 CFR 76.1003(d) states that, in a case where recovery of damages is sought, the complaint shall contain a clear and unequivocal request for damages and appropriate allegations in support of such claim.

47 CFR 76.1003(e)(1) requires cable operators, satellite cable programming vendors, or satellite broadcast programming vendors whom expressly reference and rely upon a document in asserting a defense to a program access complaint filed or in responding to a material allegation in a program access complaint filed pursuant to Section 76.1003, to include such document or documents, such as contracts for carriage of programming referenced and relied on, as part of the answer. Except as otherwise provided or directed by the Commission, any cable operator, satellite cable programming vendor or satellite broadcast programming vendor upon which a program access complaint is served under this section shall answer within twenty (20) days of service of the complaint, provided that the answer shall be filed within forty-five (45) days of service of the complaint if the complaint alleges a violation of Section 628(b) of the Communications Act of 1934, as amended, or Section 76.1001(a).

47 CFR 76.1003(e)(2) requires an answer to an exclusivity complaint to provide the defendant's reasons for refusing to sell the subject programming to the complainant. In addition, the defendant may submit its programming contracts covering the area specified in the complaint with its answer to refute allegations concerning the existence of an impermissible exclusive contract. If

there are no contracts governing the specified area, the defendant shall so certify in its answer. Any contracts submitted pursuant to this provision may be protected as proprietary pursuant to Section 76.9 of this part.

47 CFR 76.1003(e)(3) requires an answer to a discrimination complaint to state the reasons for any differential in prices, terms or conditions between the complainant and its competitor, and to specify the particular justification set forth in Section 76.1002(b) of this part relied upon in support of the differential.

47 CFR 76.1003(e)(4) requires an answer to a complaint alleging an unreasonable refusal to sell programming to state the defendant's reasons for refusing to sell to the complainant, or for refusing to sell to the complainant on the same terms and conditions as complainant's competitor, and to specify why the defendant's actions are not discriminatory.

47 CFR 76.1003(f) provides that, within fifteen (15) days after service of an answer, unless otherwise directed by the Commission, the complainant may file and serve a reply which shall be responsive to matters contained in the answer and shall not contain new matters.

47 CFR 76.1003(g) states that any complaint filed pursuant to this subsection must be filed within one year of the date on which one of three specified events occurs.

47 CFR 76.1003(h) sets forth the remedies that are available for violations of the program access rules, which include the imposition of damages, and/or the establishment of prices, terms, and conditions for the sale of programming to the aggrieved multichannel video programming distributor, as well as sanctions available under title V or any other provision of the Communications Act.

47 CFR 76.1003(j) states in addition to the general pleading and discovery rules contained in § 76.7 of this part, parties to a program access complaint may serve requests for discovery directly on opposing parties, and file a copy of the request with the Commission. The respondent shall have the opportunity to object to any request for documents that are not in its control or relevant to the dispute. Such request shall be heard, and determination made, by the Commission. Until the objection is ruled upon, the obligation to produce the disputed material is suspended. Any party who fails to timely provide discovery requested by the opposing party to which it has not raised an objection as described above, or who fails to respond to a Commission order

for discovery material, may be deemed in default and an order may be entered in accordance with the allegations contained in the complaint, or the complaint may be dismissed with prejudice.

47 CFR 76.1003(l) permits a program access complainant seeking renewal of an existing programming contract to file a petition along with its complaint requesting a temporary standstill of the price, terms, and other conditions of the existing programming contract pending resolution of the complaint, to which the defendant will have the opportunity to respond within 10 days of service of the petition, unless otherwise directed by the Commission.

47 CFR 76.1302(a) states that any video programming vendor or multichannel video programming distributor aggrieved by conduct that it believes constitute a violation of the regulations set forth in this subpart may commence an adjudicatory proceeding at the Commission to obtain enforcement of the rules through the filing of a complaint. The complaint shall be filed and responded to in accordance with the procedures specified in Section 76.7, except to the extent such procedures are modified by Section 76.1302.

47 CFR 76.1302(b) states that any aggrieved video programming vendor or multichannel video programming distributor intending to file a complaint under this section must first notify the potential defendant multichannel video programming distributor that it intends to file a complaint with the Commission based on actions alleged to violate one or more of the provisions contained in Section 76.1301 of this part. The notice must be sufficiently detailed so that its recipient(s) can determine the specific nature of the potential complaint. The potential complainant must allow a minimum of ten (10) days for the potential defendant(s) to respond before filing a complaint with the Commission.

47 CFR 76.1302(c) specifies the content of carriage agreement complaints, in addition to the requirements of Section 76.7 of this part.

47 CFR 76.1302(c)(1) provides that a program carriage complaint filed pursuant to § 76.1302 must contain the following: Whether the complainant is a multichannel video programming distributor or video programming vendor, and, in the case of a multichannel video programming distributor, identify the type of multichannel video programming distributor, the address and telephone number of the complainant, what type of multichannel video programming

distributor the defendant is, and the address and telephone number of each defendant.

47 CFR 76.1302(d) sets forth the evidence that a program carriage complaint filed pursuant to § 76.1302 must contain in order to establish a prima facie case of a violation of § 76.1301.

47 CFR 76.1302(e)(1) provides that a multichannel video programming distributor upon whom a program carriage complaint filed pursuant to § 76.1302 is served shall answer within sixty (60) days of service of the complaint, unless otherwise directed by the Commission.

47 CFR 76.1302(e)(2) states that an answer to a program carriage complaint shall address the relief requested in the complaint, including legal and documentary support, for such response, and may include an alternative relief proposal without any prejudice to any denials or defenses raised.

47 CFR 76.1302(f) states that within twenty (20) days after service of an answer, unless otherwise directed by the Commission, the complainant may file and serve a reply which shall be responsive to matters contained in the answer and shall not contain new matters.

47 CFR 76.1302(h) states that any complaint filed pursuant to this subsection must be filed within one year of the date on which one of three events occurs.

47 CFR 76.1302(j)(1) states that upon completion of such adjudicatory proceeding, the Commission shall order appropriate remedies, including, if necessary, mandatory carriage of a video programming vendor's programming on defendant's video distribution system, or the establishment of prices, terms, and conditions for the carriage of a video programming vendor's programming.

47 CFR 76.1302(k) permits a program carriage complainant seeking renewal of an existing programming contract to file a petition along with its complaint requesting a temporary standstill of the price, terms, and other conditions of the existing programming contract pending resolution of the complaint, to which the defendant will have the opportunity to respond within 10 days of service of the petition, unless otherwise directed by the Commission. To allow for sufficient time to consider the petition for temporary standstill prior to the expiration of the existing programming contract, the petition for temporary standstill and complaint shall be filed no later than thirty (30) days prior to the

expiration of the existing programming contract.

47 CFR 76.1513(a) permits any party aggrieved by conduct that it believes constitute a violation of the FCC's regulations or in section 653 of the Communications Act (47 U.S.C. 573) to commence an adjudicatory proceeding at the Commission to obtain enforcement of the rules through the filing of a complaint, which must be filed and responded to in accordance with the procedures specified in Section 76.7, except to the extent such procedures are modified by Section 76.1513.

47 CFR 76.1513(b) provides that an open video system operator may not provide in its carriage contracts with programming providers that any dispute must be submitted to arbitration, mediation, or any other alternative method for dispute resolution prior to submission of a complaint to the Commission.

47 CFR 76.1513(c) requires that any aggrieved party intending to file a complaint under this section must first notify the potential defendant open video system operator that it intends to file a complaint with the Commission based on actions alleged to violate one or more of the provisions contained in this part or in Section 653 of the Communications Act. The notice must be in writing and must be sufficiently detailed so that its recipient(s) can determine the specific nature of the potential complaint. The potential complainant must allow a minimum of ten (10) days for the potential defendant(s) to respond before filing a complaint with the Commission.

47 CFR 76.1513(d) describes the contents of an open video system complaint.

47 CFR 76.1513(e) addresses answers to open video system complaints.

47 CFR 76.1513(f) states within twenty (20) days after service of an answer, the complainant may file and serve a reply which shall be responsive to matters contained in the answer and shall not contain new matters.

47 CFR 76.1513(g) requires that any complaint filed pursuant to this subsection must be filed within one year of the date on which one of three events occurs.

47 CFR 76.1513(h) states that upon completion of the adjudicatory proceeding, the Commission shall order appropriate remedies, including, if necessary, the requiring carriage, awarding damages to any person denied carriage, or any combination of such sanctions. Such order shall set forth a timetable for compliance, and shall become effective upon release.

Federal Communications Commission.

**Sheryl D. Todd,**

*Deputy Secretary, Office of the Secretary.*

[FR Doc. 2017-18210 Filed 8-25-17; 8:45 am]

**BILLING CODE 6712-01-P**

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## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10178—American Marine Bank, Bainbridge Island, Washington

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for American Marine Bank, Bainbridge Island, Washington ("the Receiver") intends to terminate its receivership for said institution. The FDIC was appointed Receiver of American Marine Bank on January 29, 2010. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**

*Executive Secretary.*

[FR Doc. 2017-18152 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

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## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10268—Sterling Bank, Lantana, Florida

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Sterling Bank, Lantana,

Florida ("the Receiver") intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Sterling Bank on July 23, 2010. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**

*Executive Secretary.*

[FR Doc. 2017-18154 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

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## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10509—Northern Star Bank, Mankato, Minnesota

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Northern Star Bank, Mankato, Minnesota ("the Receiver") intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Northern Star Bank on December 19, 2014. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 22, 2017.  
Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18113 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10249—Washington First Intl Bank Seattle, Washington

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Washington First Intl Bank, Seattle, Washington (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Washington First Intl Bank on June 11, 2010. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.  
Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18153 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10341—Peoples State Bank, Hamtramck, Michigan

*Notice is hereby given* that the Federal Deposit Insurance Corporation (“FDIC”) as Receiver for Peoples State Bank, Hamtramck, Michigan (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed receiver of Peoples State Bank on February 11, 2011. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.  
Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18155 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10410—Mid City Bank, Inc., Omaha, Nebraska

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Mid City Bank, Inc., Omaha, Nebraska (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Mid City Bank, Inc. on November 4, 2011. The liquidation of the receivership assets

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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 22, 2017.  
Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18111 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10258—Mainstreet Savings Bank, FSB, Hastings, Michigan

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Mainstreet Savings Bank, FSB, Hastings, Michigan (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Mainstreet Savings Bank, FSB on July 16, 2010. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Date: August 22, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18108 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10506—NBRS Financial, Rising Sun, Maryland

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for NBRS Financial, Rising Sun, Maryland (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of NBRS Financial on October 17, 2014. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 22, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18112 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10111—Mainstreet Bank, Forest Lake, Minnesota

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Mainstreet Bank, Forest Lake, Minnesota (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Mainstreet Bank on August 28, 2009. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18151 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10409—All American Bank, Des Plaines, Illinois

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for All American Bank, Des Plaines, Illinois (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of All American Bank on October 28, 2011. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 22, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18110 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10485—Bank of Wausau, Wausau, Wisconsin

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for Bank of Wausau, Wausau, Wisconsin (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of Bank of Wausau on August 9, 2013. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated: August 23, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18156 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## FEDERAL DEPOSIT INSURANCE CORPORATION

### Notice to All Interested Parties of the Termination of the Receivership of 10301—First Suburban National Bank, Maywood, Illinois

*Notice is hereby given* that the Federal Deposit Insurance Corporation (FDIC) as Receiver for First Suburban National Bank, Maywood, Illinois (“the Receiver”) intends to terminate its receivership for said institution. The FDIC was appointed Receiver of First Suburban National Bank on October 22, 2010. The liquidation of the receivership assets 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 receivership will serve no useful purpose. Consequently, notice is given that the receivership 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 the receivership, such comment must be made in writing and 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 this receivership will be considered which are not sent within this time frame.

Dated August 22, 2017.

Federal Deposit Insurance Corporation.

**Robert E. Feldman,**  
*Executive Secretary.*

[FR Doc. 2017-18109 Filed 8-25-17; 8:45 am]

**BILLING CODE 6714-01-P**

## DEPARTMENT OF DEFENSE

### GENERAL SERVICES ADMINISTRATION

### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[OMB Control No. 9000-0180; Docket No. 2017-0053; Sequence 12]

### Information Collection; Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts

**AGENCY:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice of request for public comments regarding an extension to an existing OMB clearance.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act, the Regulatory Secretariat Division (MVCB) will be submitting to the Office of Management and Budget (OMB) a request to review and approve an extension of a previously approved information collection requirement regarding Biobased Procurements.

**DATES:** Submit comments on or before October 27, 2017.

**ADDRESSES:** Submit comments identified by Information Collection 9000-0180, Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts, by any of the following methods:

- *Regulations.gov:* <http://www.regulations.gov>. Submit comments via the Federal eRulemaking portal by searching the OMB control number 9000-0180. Select the link “Comment Now” that corresponds with “Information Collection 9000-0180, Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts. Follow the instructions provided on the screen. Please include your name, company name (if any), and “Information Collection 9000-0180, “Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts” on your attached document.

- *Mail:* General Services Administration, Regulatory Secretariat Division (MVCB), 1800 F Street NW., Washington, DC 20405. ATTN: Ms. Sosa/IC 9000-0180, Biobased Procurements.

**Instructions:** Please submit comments only and cite Information Collection 9000-0180, Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts. Comments received generally will be posted

without change to <http://www.regulations.gov>, including any personal and/or business confidential information provided. To confirm receipt of your comment(s), please check [www.regulations.gov](http://www.regulations.gov), approximately two to three days after submission to verify posting (except allow 30 days for posting of comments submitted by mail).

**FOR FURTHER INFORMATION CONTACT:** Mr. Charles Gray, Procurement Analyst, Office of Governmentwide Acquisition Policy, at telephone 703-795-6328, or email [charles.gray@gsa.gov](mailto:charles.gray@gsa.gov).

### SUPPLEMENTARY INFORMATION:

#### A. Purpose

Federal Acquisition Regulation clause 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts, requires prime contractors to report annually the product types and dollar values of U.S. Department of Agriculture (USDA)-designated biobased products purchased to the System for Award Management (SAM) Web site. The information reported by prime contractors enables Federal agencies to report annually to the Office of Federal Procurement Policy (OFPP) concerning actions taken to implement and measure progress in carrying out the preference for biobased products required under section 9002 of the Farm Security and Rural Investment Act of 2002, codified at 7 U.S.C. 8102.

#### B. Annual Reporting Burden

To determine the number of contractors performing construction and service contracts that may involve the purchase of USDA-designated biobased products, fiscal year 2016 data in the Federal Procurement Data System (FPDS) was reviewed to calculate the number entities with unique DUNS numbers that were awarded contracts for the following selected Product Services Codes: A—Research and Development; F—Natural Resources Management; J—Maintenance, Repair, and Rebuilding of Equipment; M—Operation of Government-Owned Facility; S—Utilities and Housekeeping Services; T—Photographic, Mapping, Printing, and Publication Services; Y—Construction of Structures and Facilities; and Z—Maintenance, Repair or Alteration of Real Property. The clause at FAR 52.223-2 will apply to the majority of the contract actions in the selected PSCs

The estimated total burden is as follows:

*Respondents:* 51,457.

*Responses per Respondent:* 5.

*Total Annual Responses:* 257,285.

*Hours per Response:* 5.  
*Total Burden Hours:* 1,286,425.  
*Affected Public:* Businesses or other for-profit and not-for-profit institutions.  
*Frequency:* Annually.

### C. Public Comments

*Public comments are particularly invited on:* Whether this collection of information is necessary for the proper performance of functions of the FAR, and whether it will have practical utility; whether our estimate of the public burden of this collection of information is accurate, and based on valid assumptions and methodology; ways to enhance the quality, utility, and clarity of the information to be collected; and ways in which we can minimize the burden of the collection of information on those who are to respond, through the use of appropriate technological collection techniques or other forms of information technology.

*Obtaining Copies of Proposals:* Requesters may obtain a copy of the information collection documents from the General Services Administration, Regulatory Secretariat Division (MVCB), 1800 F Street NW., Washington, DC 20405, telephone 202-501-4755. Please cite OMB Control No. 9000-0180, Affirmative Procurement of Biobased Procurements Under Services and Construction Contracts, in all correspondence.

Dated: August 22, 2017.

#### Lorin S. Curit,

Director, Federal Acquisition Policy Division,  
 Office of Government-wide Acquisition  
 Policy, Office of Acquisition Policy, Office  
 of Government-wide Policy.

[FR Doc. 2017-18105 Filed 8-25-17; 8:45 am]

BILLING CODE 6820-EP-P

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Food and Drug Administration

[Docket No. FDA-2017-N-0001]

#### Cellular, Tissue, and Gene Therapies Advisory Committee; Notice of Meeting

**AGENCY:** Food and Drug Administration, HHS.

**ACTION:** Notice.

**SUMMARY:** The Food and Drug Administration (FDA) announces a forthcoming public advisory committee meeting of the Cellular, Tissue, and Gene Therapies Advisory Committee (CTGTAC). The general function of the committee is to provide advice and recommendations to the Agency on FDA's regulatory issues. The meeting will be open to the public.

**DATES:** The meeting will be held on October 12, 2017, from 8:30 a.m. to 5 p.m.

**ADDRESSES:** FDA White Oak Campus, 10903 New Hampshire Ave., Bldg. 31 Conference Center, the Great Room (Rm. 1503) Silver Spring, MD 20993-0002.

For those unable to attend in person, the meeting will also be Webcast and will be available at the following link: <https://collaboration.fda.gov/ctgtac101217>. Answers to commonly asked questions including information regarding special accommodations due to a disability, visitor parking, and transportation may be accessed at: <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm408555.htm>.

#### FOR FURTHER INFORMATION CONTACT:

Prabhakara L. Atreya or Denise Royster, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 6306, Silver Spring, MD 20993-0002, 240-402-8006, [prabhakara.atreya@fda.hhs.gov](mailto:prabhakara.atreya@fda.hhs.gov) and 240-402-8158, [denise.royster@fda.hhs.gov](mailto:denise.royster@fda.hhs.gov), or FDA Advisory Committee Information Line, 1-800-741-8138 (301-443-0572 in the Washington, DC area). A notice in the **Federal Register** about last minute modifications that impact a previously announced advisory committee meeting cannot always be published quickly enough to provide timely notice. Therefore, you should always check the Agency's Web site at <https://www.fda.gov/AdvisoryCommittees/default.htm> and scroll down to the appropriate advisory committee meeting link, or call the advisory committee information line to learn about possible modifications before coming to the meeting.

#### SUPPLEMENTARY INFORMATION:

*Agenda:* On October 12, 2017, the CTGTAC will meet in an open session to discuss and make recommendations on the safety and effectiveness of biologics license application (BLA) for voretigene neparvovec (BLA 125610), submitted by Spark Therapeutics, Inc. The proposed indication (use) for this product is for the treatment of patients with vision loss due to confirmed biallelic RPE65 mutation-associated retinal dystrophy.

FDA intends to make background material available to the public no later than 2 business days before the meeting. If FDA is unable to post the background material on its Web site prior to the meeting, the background material will be made publicly available at the

location of the advisory committee meeting, and the background material will be posted on FDA's Web site after the meeting. Background material is available at <https://www.fda.gov/AdvisoryCommittees/Calendar/default.htm>. Scroll down to the appropriate advisory committee meeting link.

*Procedure:* Interested persons may present data, information, or views, orally or in writing, on issues pending before the committee. Written submissions may be made to the contact person on or before October 4, 2017. Oral presentations from the public will be scheduled between approximately 11:15 a.m. and 12:15 p.m. Those individuals interested in making formal oral presentations should notify the contact person and submit a brief statement of the general nature of the evidence or arguments they wish to present, the names and addresses of proposed participants, and an indication of the approximate time requested to make their presentation on or before September 26, 2017. Time allotted for each presentation may be limited. If the number of registrants requesting to speak is greater than can be reasonably accommodated during the scheduled open public hearing session, FDA may conduct a lottery to determine the speakers for the scheduled open public hearing session. The contact person will notify interested persons regarding their request to speak by September 27, 2017.

Persons attending FDA's advisory committee meetings are advised that the Agency is not responsible for providing access to electrical outlets.

FDA welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with disabilities. If you require accommodations due to a disability, please contact Prabhakara Atreya at least 7 days in advance of the meeting.

FDA is committed to the orderly conduct of its advisory committee meetings. Please visit our Web site at: <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm111462.htm> for procedures on public conduct during advisory committee meetings.

Notice of this meeting is given under the Federal Advisory Committee Act (5 U.S.C. app. 2).

Dated: August 23, 2017.

**Anna K. Abram,**

*Deputy Commissioner for Policy, Planning, Legislation, and Analysis.*

[FR Doc. 2017-18161 Filed 8-25-17; 8:45 am]

BILLING CODE 4164-01-P

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Food and Drug Administration

[Docket No. FDA-2017-N-4561]

#### **Bone, Reproductive and Urologic Drugs Advisory Committee; Notice of Meeting; Establishment of a Public Docket; Request for Comments**

**AGENCY:** Food and Drug Administration, HHS.

**ACTION:** Notice; establishment of a public docket; request for comments.

**SUMMARY:** The Food and Drug Administration (FDA or Agency) announces a forthcoming public advisory committee meeting of the Bone, Reproductive and Urologic Drugs Advisory Committee. The general function of the committee is to provide advice and recommendations to the Agency on FDA's regulatory issues. The meeting will be open to the public. FDA is establishing a docket for public comment on this document.

**DATES:** The public meeting will be held on December 7, 2017, from 8 a.m. to 5 p.m.

**ADDRESSES:** FDA White Oak Campus, 10903 New Hampshire Ave., Bldg. 31 Conference Center, the Great Room (Rm. 1503), Silver Spring, MD 20993-0002. Answers to commonly asked questions including information regarding special accommodations due to a disability, visitor parking, and transportation may be accessed at: <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm408555.htm>.

FDA is establishing a docket for public comment on this meeting. The docket number is FDA-2017-N-4561. The docket will close on December 6, 2017. Submit either electronic or written comments on this public meeting by December 6, 2017. Please note that late, untimely filed comments will not be considered. Electronic comments must be submitted on or before December 6, 2017. The <https://www.regulations.gov> electronic filing system will accept comments until midnight Eastern Time at the end of December 6, 2017. Comments received by mail/hand delivery/courier (for written/paper submissions) will be considered timely if they are

postmarked or the delivery service acceptance receipt is on or before that date.

Comments received on or before November 22, 2017, will be provided to the committee. Comments received after that date will be taken into consideration by the Agency.

You may submit comments as follows:

#### *Electronic Submissions*

Submit electronic comments in the following way:

- *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to <https://www.regulations.gov> will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on <https://www.regulations.gov>.

- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

#### *Written/Paper Submissions*

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

*Instructions:* All submissions received must include the Docket No. FDA-2017-N-4561 for "Bone, Reproductive and Urologic Drugs Advisory Committee; Notice of Meeting; Establishment of a Public Docket; Request for Comments." Received comments, those filed in a timely manner (see **ADDRESSES**), will be placed in the docket and, except for those submitted as "Confidential

Submissions," publicly viewable at <https://www.regulations.gov> or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday.

- *Confidential Submissions—*To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states "THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION." The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on <https://www.regulations.gov>. Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as "confidential." Any information marked as "confidential" will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: <https://www.gpo.gov/fdsys/pkg/FR-2015-09-18/pdf/2015-23389.pdf>.

*Docket:* For access to the docket to read background documents or the electronic and written/paper comments received, go to <https://www.regulations.gov> and insert the docket number, found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

**FOR FURTHER INFORMATION CONTACT:** Kalyani Bhatt, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 31, Rm. 2417, Silver Spring, MD 20993-0002, 301-796-9001, Fax: 301-847-8533, [kalyani.bhatt@fda.hhs.gov](mailto:kalyani.bhatt@fda.hhs.gov), or FDA Advisory Committee Information Line, 1-800-741-8138 (301-443-0572 in the Washington, DC area). A notice in the **Federal Register** about last minute modifications that impact a previously announced advisory committee meeting cannot always be published quickly enough to provide timely notice.

Therefore, you should always check the Agency's Web site at <https://www.fda.gov/AdvisoryCommittees/default.htm> and scroll down to the appropriate advisory committee meeting link, or call the advisory committee information line to learn about possible modifications before coming to the meeting.

**SUPPLEMENTARY INFORMATION:**

*Agenda:* The committee will discuss appropriate patient selection criteria and clinical trial design features, including acceptable endpoints, for demonstrating clinical benefit for drugs intended to treat interstitial cystitis and bladder pain syndrome. The committee will also discuss whether bladder pain syndrome and interstitial cystitis reflect overlapping or different populations, and whether it is appropriate to assess efficacy in the same way for both conditions.

FDA intends to make background material available to the public no later than 2 business days before the meeting. If FDA is unable to post the background material on its Web site prior to the meeting, the background material will be made publicly available at the location of the advisory committee meeting, and the background material will be posted on FDA's Web site after the meeting. Background material is available at <https://www.fda.gov/AdvisoryCommittees/Calendar/default.htm>. Scroll down to the appropriate advisory committee meeting link.

*Procedure:* Interested persons may present data, information, or views, orally or in writing, on issues pending before the committee. All electronic and written submissions submitted to the docket (see **ADDRESSES**) on or before November 22, 2017, will be provided to the committee. Oral presentations from the public will be scheduled between approximately 1 p.m. and 2 p.m. Those individuals interested in making formal oral presentations should notify the contact person and submit a brief statement of the general nature of the evidence or arguments they wish to present, the names and addresses of proposed participants, and an indication of the approximate time requested to make their presentation on or before November 14, 2017. Time allotted for each presentation may be limited. If the number of registrants requesting to speak is greater than can be reasonably accommodated during the scheduled open public hearing session, FDA may conduct a lottery to determine the speakers for the scheduled open public hearing session. The contact person will notify interested persons

regarding their request to speak by November 15, 2017.

Persons attending FDA's advisory committee meetings are advised that the Agency is not responsible for providing access to electrical outlets.

FDA welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with disabilities. If you require special accommodations due to a disability, please contact Kalyani Bhatt at least 7 days in advance of the meeting.

FDA is committed to the orderly conduct of its advisory committee meetings. Please visit our Web site at <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm111462.htm> for procedures on public conduct during advisory committee meetings.

Notice of this meeting is given under the Federal Advisory Committee Act (5 U.S.C. app. 2).

Dated: August 22, 2017.

**Anna K. Abram,**

*Deputy Commissioner for Policy, Planning, Legislation, and Analysis.*

[FR Doc. 2017-18131 Filed 8-25-17; 8:45 am]

**BILLING CODE 4164-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Health Resources and Services Administration**

**Meeting of the National Advisory Committee on Rural Health and Human Services**

**AGENCY:** Health Resources and Services Administration (HRSA), Department of Health and Human Services.

**ACTION:** Notice of Meeting.

**SUMMARY:** In accordance with the Federal Advisory Committee Act, notice is hereby given of a National Advisory Committee on Rural Health and Human Services (NACRHHS) meeting. The meeting will be open to the public. Information about the NACRHHS meeting can be obtained by accessing the following Web site: <http://www.hrsa.gov/advisorycommittees/rural/>.

**DATES:** The meeting will be held on September 11, 2017, 8:45 a.m. to 5:00 p.m. MDT; September 12, 2017, 8:30 a.m. to 5:15 p.m. MDT; and September 13, 2017, 8:30 a.m. to 11:00 a.m. MDT.

**ADDRESSES:** This meeting will be held at the Spring Hill Suites located at 424 E. Parkcenter Blvd., Boise, Idaho 83706, (208) 342-1044.

**FOR FURTHER INFORMATION CONTACT:**

Steve Hirsch, MSLS, Administrative Coordinator, National Advisory Committee on Rural Health and Human Services, Health Resources and Services Administration, Parklawn Building, 17W29C, 5600 Fishers Lane, Rockville, MD 20857, Telephone (301) 443-0835, Fax (301) 443-2803.

**SUPPLEMENTARY INFORMATION:**

NACRHHS provides counsel and recommendations to the Secretary with respect to the delivery, research, development, and administration of health and human services in rural areas.

The meeting on Monday, September 11, will be called to order at 8:45 a.m. by the Chairperson of the Committee, The Honorable Ronnie Musgrove. The Committee will examine the issue of suicide in rural areas and the issue of Rural Health Clinic Modernization. The day will conclude with a period of public comment at approximately 5:15 p.m.

The Committee will break into Subcommittees and depart for site visits Tuesday morning, September 12, at approximately 8:15 a.m. Subcommittees will visit First Baptist Church, 126 S. Hayes Avenue in Emmett, Idaho and the North Canyon Medical Center, 267 N. Canyon Drive in Gooding, Idaho. The day will conclude at the Spring Hill Suites with a period of public comment at approximately 5:00 p.m.

The Committee will meet to summarize key findings and develop a work plan for the next quarter and the following meeting on Wednesday morning, September 13, at 8:30 a.m. Persons interested in attending any portion of the meeting should contact Alfred Delena at the Federal Office of Rural Health Policy (FORHP) via telephone at (301) 443-3388 or by email at [ADelena@hrsa.gov](mailto:ADelena@hrsa.gov). The Committee meeting agenda will be posted on the Committee's Web site at <http://www.hrsa.gov/advisorycommittees/rural/>.

**Amy McNulty,**

*Acting Director, Division of the Executive Secretariat.*

[FR Doc. 2017-18139 Filed 8-25-17; 8:45 am]

**BILLING CODE 4165-15-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Notice of Intent To Establish the Pain Management Best Practices Inter-Agency Task Force and Request for Nominations for Task Force Members**

**AGENCY:** Office of the Assistant Secretary for Health, Office of the

Secretary, U.S. Department of Health and Human Services.

**ACTION:** Notice.

**SUMMARY:** The U.S. Department of Health and Human Services (HHS) hereby gives notice of its intent to establish the Pain Management Best Practices Inter-Agency Task Force (Task Force) pursuant to section 101 of the Comprehensive Addiction and Recovery Act of 2016. The Task Force will consist of representatives of specific Federal agencies and non-federal individuals and entities who represent diverse disciplines and views. The Task Force will provide advice and recommendations for development of best practices for pain management and prescribing pain medication and a strategy for disseminating such best practices to relevant Federal agencies and the general public.

Through this notice, HHS is also requesting nominations of individuals who are interested in being considered for appointment to the Task Force. Resumes or curricula vitae from qualified individuals who wish to be considered for appointment as a member of the Task Force are currently being accepted.

**DATES:** Nominations must be received no later than close of business September 27, 2017.

**ADDRESSES:** All nominations must be submitted via email to the attention of Vanila M. Singh, M.D., Chief Medical Officer at [PainTaskforce@hhs.gov](mailto:PainTaskforce@hhs.gov).

**FOR FURTHER INFORMATION CONTACT:** Vanila M. Singh, M.D., Chief Medical Officer, Office of the Assistant Secretary for Health; U.S. Department of Health and Human Services; Telephone: (202) 205-3841; Fax: (202) 205-2107; Email address: [PainTaskforce@hhs.gov](mailto:PainTaskforce@hhs.gov). When the charter for the Task Force has been filed with the appropriate Congressional committees and the Library of Congress, this document will be made available online. Web site information about activities of the Task Force will be provided when the URL has been identified. The charter will include detailed information about the purpose, function, and structure of the Task Force.

**SUPPLEMENTARY INFORMATION:** Section 101 of the Comprehensive Addiction and Recovery Act of 2016 (Pub. L. 114-198) (CARA) authorizes the Secretary of HHS, in cooperation with the Secretary of Veterans Affairs and the Secretary of Defense, to convene the Task Force. The Task Force will consist of representatives of specific Federal agencies and non-federal individuals and entities who represent diverse

disciplines and views. The Task Force will identify, review, and determine whether there are gaps or inconsistencies in best practices among Federal agencies; propose updates to best practices and recommendations on addressing gaps or inconsistencies; provide the public with an opportunity to comment on any proposed updates and recommendations; and develop a strategy for disseminating information about best practices.

The Task Force will provide advice and recommendations for development of best practices for pain management and prescribing pain medication and a strategy for disseminating such best practices to relevant Federal agencies and the general public. The functions of the Task Force will be solely advisory in nature. The Task Force will be established as a non-discretionary Federal advisory committee.

When the charter for the Task Force is approved, it will be filed with the appropriate Congressional committees and the Library of Congress; hard copies of this document will be made available upon request. The approved charter will also be accessible online.

**Objectives and Scope of Activities.** The Secretary of HHS, in cooperation with the Secretary of Veterans Affairs and the Secretary of Defense, shall convene the Task Force to identify, review, and determine whether there are gaps or inconsistencies in best practices among Federal agencies; propose updates to best practices and recommendations on addressing gaps or inconsistencies; provide the public with an opportunity to comment on any proposed updates and recommendations; and develop a strategy for disseminating information about best practices.

**Membership and Designation.** The Task Force shall consist of not more than 30 members. The Assistant Secretary for Health of HHS shall select the Chair. The Chair may select a Vice-chair from among Task Force members. The members of the Task Force shall include currently licensed and practicing physicians, dentists, and non-physician prescribers; currently licensed and practicing pharmacists and pharmacies; experts in the fields of pain research and addiction research, including adolescent and young adult addiction; experts on the health of, and prescription opioid use disorders in, members of the Armed Forces and veterans; and experts in the field of minority health. The members of the Task Force shall also include individuals who are appointed to serve under CARA subsection 101(c)(5) as representatives of pain management

professional organizations; the mental health treatment community; the addiction treatment community, including individuals in recovery from substance use disorder; pain advocacy groups, including patients; veteran service organizations; groups with expertise on overdose reversal, including first responders; State medical boards; and hospitals. The Secretary shall ensure that the membership of the Task Force includes individuals who represent rural and underserved areas. The composition of the Task Force shall also include federal members who shall serve as representatives for the following departments and agency: The Department of Health and Human Services and relevant HHS agencies, the Department of Veterans Affairs, the Department of Defense, and the Office of National Drug Control Policy.

Members who are not officers or employees of the United States Government and who are not appointed as representative members under CARA subsection 101(c)(5) shall be classified as special government employees (SGEs). Members of the Task Force who are officers or employees of the United States Government shall be appointed to serve at the discretion of the head of the respective Federal departments and agency. All members shall be appointed to serve for the duration of time that the Task Force is authorized to operate. Any member who is appointed to fill the vacancy of an unexpired term shall be appointed to serve for the remainder of that term.

Pursuant to advance written agreement, members of the Task Force who are not officers or employees of the United States Government shall receive no stipend for the advisory service that they render as members of the Task Force. Members appointed as SGEs shall receive per diem and reimbursement for travel expenses incurred in relation to performing duties for the Task Force, as authorized by law under 5 U.S.C. 5703 for persons who are employed intermittently to perform services for the Federal government and in accordance with Federal travel regulations. Members appointed as representatives of a designated entity under CARA subsection 101(c)(5) may be allowed to receive per diem and reimbursement for any applicable expenses that are incurred to conduct business related to the Task Force. Federal employees assigned as advisory committee members or staff members remain covered under their current compensation system.

**Estimated Number and Frequency of Meetings.** The Task Force shall meet not less than two times a calendar year,

depending upon the availability of funds. The meetings may be conducted by teleconference or videoconference at the discretion of the Designated Federal Officer. The meetings shall be open to the public, except as determined otherwise by the Secretary, or other official to whom authority has been delegated, in accordance with the guidelines under Government in the Sunshine Act, 5 U.S.C. 552b(c). Notice of all meetings shall be provided to the public in accordance with the Federal Advisory Committee Act. Meetings shall be conducted and records of the proceedings shall be kept, as required by applicable laws and departmental policies. A quorum is required for the Task Force to meet to conduct business. A quorum shall consist of a majority of the Task Force's members. When the Secretary or the Secretary's designee determines that a meeting shall be closed or partially closed to the public, in accordance with provisions of Government in the Sunshine Act, 5 U.S.C. 552b(c), then a report shall be prepared by the Designated Federal Officer that includes, at a minimum, a list of members and their business addresses, the Task Force's functions, date and place of the meeting, and a summary of the Task Force's activities and recommendations made during the fiscal year. A copy of the report shall be provided to the Department Committee Management Officer.

**Nominations:** Nominations, including self-nominations, of individuals who have the specified expertise and knowledge will be considered for appointment as members of the Task Force. A nomination should include, at a minimum, the following for each nominee: (1) A letter of nomination that clearly states the name and affiliation of the nominee, the basis for the nomination, and a statement from the nominee that indicates that the individual is willing to serve as a member of the Task Force, if selected; (2) the nominator's name, address, and daytime telephone number, and the address, telephone number, and email address of the individual being nominated; and (3) a current copy of the nominee's curriculum vitae or resume, which should be limited to no more than 10 pages.

Every effort will be made to ensure that the composition of the Task Force includes individuals from various geographic locations, including rural and underserved areas; racial and ethnic minorities; genders, and persons living with disabilities.

Individuals other than officers or employees of the United States government being considered for

appointment as members of the Task Force will be required to complete and submit a report of their financial holdings. An ethics review must be conducted to ensure that individuals appointed as members of the Task Force are not involved in any activity that may pose a potential conflict of interest for the official duties that are to be performed. This is a federal ethics requirement that must be satisfied upon entering the position and annually throughout the established term of appointment on the Task Force.

**Authority:** Section 101 of the Comprehensive Addiction and Recovery Act of 2016 (Pub. L. 114-198) authorizes establishment of the Pain Management Best Practices Inter-Agency Task Force. The Task Force will be governed by provisions of the Federal Advisory Committee Act, Public Law 92-463, as amended (5 U.S.C. App. 2), which sets forth standards for the formation and use of Federal advisory committees.

Dated: August 21, 2017.

**Donald Wright,**

*Acting Assistant Secretary for Health.*

[FR Doc. 2017-18182 Filed 8-25-17; 8:45 am]

**BILLING CODE 4150-28-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Document Identifier: OS-0990-new]

### Agency Information Collection Request. 30-Day Public Comment Request

**AGENCY:** Office of the Secretary, HHS.

**ACTION:** Notice.

**SUMMARY:** In compliance with the requirement of the Paperwork Reduction Act of 1995, the Office of the Secretary (OS), Department of Health and Human Services, is publishing the following summary of a proposed collection for public comment.

**DATES:** Comments on the ICR must be received on or before September 27, 2017.

**ADDRESSES:** Submit your comments to [OIRA\\_submission@omb.eop.gov](mailto:OIRA_submission@omb.eop.gov) or via facsimile to (202) 395-5806.

**FOR FURTHER INFORMATION CONTACT:** Sherrette Funn, [Sherrette.Funn@hhs.gov](mailto:Sherrette.Funn@hhs.gov) or (202) 795-7714. When submitting comments or requesting information, please include the document identifier 0990-New-30D and project title for reference

**SUPPLEMENTARY INFORMATION:** Interested persons are invited to send comments regarding this burden estimate or any other aspect of this collection of

information, including any of the following subjects: (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.

**Project Title:** Assessment of the Impact of Energy Development on the Behavioral Health of Women in Western North Dakota and Eastern Montana, The Region VIII Office of the Assistant Secretary for Health (OASH), Office on Women's Health (OWH).

**Abstract:** The Office on Women's Health (OWH) in the Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services (HHS) is requesting approval from the Office of Management and Budget (OMB) for a new data collection for the Assessment of the Impact of Energy Development on the Behavioral Health of Women in Western North Dakota and Eastern Montana. Its mission is to provide national leadership and coordination to improve the health of women and girls through policy, education and model programs. Region VIII OASH/OWH is interested in improving women's behavioral health associated with the impact of energy development through gender based data collection and analysis. The discovery and subsequent development of the Parshall Oil Field within the Bakken region of Western North Dakota has led to significant economic opportunity and population growth in the region (Eastern Montana and Western North Dakota). Rapid population growth has many intended and unintended consequences, both positive and negative, on the social and economic environment of the region and, consequently, the population's health and well-being.

**Need and Proposed Use of the Information:** There are well-documented environmental health issues associated with oil and gas development, including air, water, soil, noise, and light pollution. However, there are additional social, physical and mental health effects that are less well documented. Current research is very limited, but preliminary evidence suggests that women have unmet behavioral health needs due in part to the energy development and population surge in region. These data will ultimately be used to understand the impact of energy development on the behavioral health of women in Eastern Montana and Western North Dakota.

There will be a final report that is thematically organized and describes key findings and strategic recommendations for Region VIII OASH/OWH to consider supporting future evidence-based program development and implementation,

policy recommendations, and future research.

*Likely Respondents:* Data for this assessment will be collected through three mechanisms—a survey of women living in the assessment geography, focus groups with a cross-section of women and other key groups living in

the assessment geography, key leaders and stakeholders across a variety of governmental and non-governmental sectors.

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	Average burden per response (in hours)	Total burden hours
Community Survey .....	500	1	15/60	125
Focus Groups .....	240	1	90/60	360
Interviews .....	40	1	60/60	40
Total .....	780	1	40.4/60	525

**Terry S. Clark,**  
*Asst Information Collection Clearance Officer.*  
 [FR Doc. 2017–18117 Filed 8–25–17; 8:45 am]  
**BILLING CODE 4150–33–P**

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

301–496–2644. A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.

**SUPPLEMENTARY INFORMATION:**  
 Technology description follows.

**HIV Targets CD62L on Central Memory T Cells Through Viral Envelope Glycans for Adhesion and Induces Selectin Shedding for Viral Release**

*Description of Technology*

Despite the success of anti-retroviral therapy in controlling HIV in infected individuals, treatment is less effective at eliminating HIV viral reservoirs. The nature of HIV reservoirs and the factors controlling their size and release are a major research focus for achieving a cure for HIV/AIDS.

NIAID researchers have identified L-selectin/CD62L as a new target for treating HIV by inhibiting viral release from infected cells. They found that shedding of CD62L on T cells is required for the efficient release of HIV virus from infected cells. Further, they have shown that inhibition of CD62L shedding dramatically reduced HIV–1 infection and viral release from both viremic and aviremic CD4+ T cells. Therefore, inhibitors for CD62L sheddase can function as an anti-HIV treatment that may be effective alone or in combination with existing therapeutics.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. 209 and 37 CFR part 404, as well as for further development and evaluation under a research collaboration.

*Potential Commercial Applications*

- New target for HIV therapeutic development.

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**National Institute of Allergy and Infectious Diseases; 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 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 contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Institute of Allergy and Infectious Diseases Special Emphasis Panel NIAID Peer Review Meeting.

*Date:* September 20–21, 2017.

*Time:* 12:00 p.m. to 4:00 p.m.

*Agenda:* To review and evaluate contract proposals.

*Place:* National Institutes of Health, 5601 Fishers Lane, Rockville, MD 20892, (Telephone Conference Call).

*Contact Person:* Kelly Y. Poe, Ph.D., Scientific Review Program, Division of Extramural Activities, Room 3F40B, National Institutes of Health, NIAID, 5601 Fishers Lane, MSC 9823, Bethesda, MD 20892–9823, (240) 669–5036, [poeky@mail.nih.gov](mailto:poeky@mail.nih.gov).

Dated: August 22, 2017.

**Natasha M. Copeland,**  
*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017–18121 Filed 8–25–17; 8:45 am]

**BILLING CODE 4140–01–P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Government-Owned Inventions; Availability for Licensing**

**AGENCY:** National Institutes of Health, HHS.

**ACTION:** Notice.

**SUMMARY:** The inventions listed below are owned by an agency of the U.S. Government and are available for licensing to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

**FOR FURTHER INFORMATION CONTACT:**

Chris Kornak, 240–627–3705, [Chris.Kornak@nih.gov](mailto:Chris.Kornak@nih.gov). Licensing information and copies of the U.S. patent applications listed below may be obtained by communicating with the indicated licensing contact at the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD 20852; tel.

*Competitive Advantages*

- This invention comprises a method of treating HIV using therapeutics geared toward viral release and entry, distinguishing it from other antiviral candidates with its method of action.

- CD62L is a new target for HIV

*Development Stage*

- In vitro studies; Proof-of-concept studies.

*Inventors*

Peter Sun, NIAID, NIH  
Joseph Kononchik, NIAID, NIH  
Joanna Ireland, NIAID, NIH  
Ruiping Wang, NIAID, NIH

*Intellectual Property:* HHS Reference No. E-261-2015/0—PCT No. PCT/US2016/068713 filed 12/27/2016.

*Licensing Contact:* Chris Kornak, 240-627-3705, [Chris.Kornak@nih.gov](mailto:Chris.Kornak@nih.gov).

*Collaborative Research Opportunity:* The Technology Transfer and Intellectual Property Office (TTIPO) is seeking parties interested in collaborative research to further co-develop this technology by identifying pharmacological compounds inhibiting CD62L shedding by using high throughput compound screening. For collaboration opportunities, please contact Chris Kornak, 240-627-3705, [Chris.Kornak@nih.gov](mailto:Chris.Kornak@nih.gov).

Dated: August 15, 2017.

**Suzanne Frisbie,**

*Deputy Director, Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases.*

[FR Doc. 2017-18137 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****Office of the Director; Notice of Charter Renewal**

It is determined that the Advisory Committee to the Deputy Director for Intramural Research, National Institutes of Health, is in the public interest in connection with the performance of duties imposed on the National Institutes of Health by law, and that these duties can best be performed through the advice and counsel of this group.

In accordance with Title 41 of the U.S. Code of Federal Regulations, Section 102-3.65(a), notice is hereby given that the Charter for the Advisory Committee to the Deputy Director for Intramural Research, National Institutes of Health, was renewed for an

additional two-year period on August 15, 2017.

Inquiries may be directed to Jennifer Spaeth, Director, Office of Federal Advisory Committee Policy, Office of the Director, National Institutes of Health, 6701 Democracy Boulevard, Suite 1000, Bethesda, Maryland 20892 (Mail code 4875), Telephone (301) 496-2123, or [spaethj@od.nih.gov](mailto:spaethj@od.nih.gov).

Dated: August 18, 2017.

**Jennifer Spaeth,**

*Director, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18197 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****National Institute on Aging; 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:* National Institute on Aging Initial Review Group; Behavior and Social Science of Aging Review Committee.

*Date:* October 5-6, 2017.

*Time:* 3:00 p.m. to 2:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda Marriott, 5151 Pooks Hill Road, Bethesda, MD 20814.

*Contact Person:* Kimberly Firth, Ph.D., National Institute on Aging, Gateway Building, 7201 Wisconsin Avenue, Suite 2C212, Bethesda, MD 20892, 301-402-7702, [kimberly.firth@nih.gov](mailto:kimberly.firth@nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.866, Aging Research, National Institutes of Health, HHS)

Dated: August 23, 2017.

**Melanie J. Pantoja,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18199 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****Proposed Collection: 60-Day Comment Request; Generic Clearance To Support the Safe to Sleep® Campaign at the Eunice Kennedy Shriver National Institute for Child Health and Human Development (NICHD)**

**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 Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), the National Institutes of Health (NIH) will publish periodic summaries of proposed 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: Lorena Kaplan, M.P.H., CHES, Office of Communications, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, 31 Center Drive, Room 2A32, Bethesda, Maryland 20892, or call non-toll free number (301) 496-6670 or Email your request, including your address to [lorena.kaplan@nih.gov](mailto:lorena.kaplan@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 minimize 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:* Generic Clearance to Support the Safe to Sleep® Campaign at the Eunice Kennedy Shriver National Institute for Child Health and Human Development (NICHD), 0925–0701 Reinstatement without Change Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH).

*Need and Use of Information Collection:* This is a request to reinstate without change a generic clearance that would be used for submissions specific to the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Safe to Sleep® (STS) public education campaign. Submissions for the STS campaign will be used to assess the understanding and reach of STS campaign materials and messages, and to monitor and improve campaign activities such as training workshops and overall implementation. The purpose of this information collection is to monitor and modify campaign activities, to plan future campaign activities, to develop messages and materials, and to develop

distribution and outreach strategies that are effective at communicating their message to bring about the intended response, awareness, and/or behavioral change for the target audiences. This generic clearance will enable the NICHD to: (1) More efficiently assess the implementation of campaign activities; (2) better understand the target audiences’ knowledge, attitudes, and beliefs toward STS messages and materials; (3) better understand how the campaign activities have influenced the target audiences’ behaviors and practices; and (4) monitor and improve activities such as trainings, materials, and messages. Having a way to gather feedback on the STS campaign activities is critical to assessing the reach and effect of campaign efforts. Data collected for the campaign can inform where future STS campaign resources can produce the most meaningful results.

Data collected for the STS campaign generic clearance will be used by a number of audiences, including STS campaign staff, NICHD leadership, STS campaign collaborators, Federal SUID/ SIDS Workgroup members, SUID/SIDS stakeholders, clinical and maternal and child health professionals. These audiences may use the information collections to: (1) Develop new campaign messages, materials, and/or training curricula; (2) monitor and improve campaign activities; (3) make decisions about campaign activities; (4)

inform current campaign activities; and (5) inform and/or change practices and behaviors of program participants.

Examples of the types of information collections that could be included under this generic clearance include: *Focus groups and in-depth interviews* with parents/caregivers and/or health professionals to get feedback on distribution and outreach activities, and/or campaign messages; and *Surveys* with parents/caregivers and/or health professionals to: (1) Assess the usefulness of the new STS campaign materials, including print and online materials and a video, (2) track outreach experiences of program participants, (3) assess training participants’ changes in knowledge related to safe infant sleep behavior and implementation of outreach methods taught, and (4) assess program participants’ resource needs.

The sub-studies for this generic clearance will be small scale, designed to obtain results frequently and quickly to guide campaign development and implementation, inform campaign direction, and be used internally for campaign management purposes. NICHD’s current scope and capacity for STS generic sub-studies is non-existent and this request would fill this gap.

OMB approval is requested for 3 years. There are no costs to respondents other than their time. The total estimated annualized burden hours are 12,920.

**ESTIMATED ANNUALIZED BURDEN HOURS**

Form name	Type of respondents	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total annual burden hours
Focus Groups .....	General Public .....	45	1	1	45
Interviews .....	General Public .....	45	1	1	45
Pre/Post Tests .....	General Public .....	3,500	2	15/60	1,750
Pre/Post Tests .....	Health Professionals ....	20,000	2	15/60	10,000
Surveys .....	Health Professionals ....	2,000	1	30/60	1,000
Tracking/Feedback Form .....	Health Educators .....	40	2	1	80
<b>Total .....</b>	.....	<b>25,630</b>	<b>49,170</b>	.....	<b>12,920</b>

Dated: August 23, 2017.

**Jennifer Guimond,**

*Project Clearance Liaison, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health.*

[FR Doc. 2017–18196 Filed 8–25–17; 8:45 am]

**BILLING CODE 4140–01–P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Center For Scientific Review; Notice of Closed Meetings**

Pursuant to section 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 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; PAR: Development of Appropriate Pediatric Formulations and Pediatric Drug Delivery Systems.

*Date:* September 21–22, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

*Contact Person:* Paek-Gyu Lee, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4201, MSC 7812, Bethesda, MD 20892, (301) 613–2064, [leepg@csr.nih.gov](mailto:leepg@csr.nih.gov).

*Name of Committee:* Center for Scientific Review Special Emphasis Panel; PAR Panel: Cancer-Related Behavioral Research through Integrating Existing Data.

*Date:* September 22, 2017.

*Time:* 12:30 p.m. to 4:30 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:* Suzanne Ryan, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3139, MSC 7770, Bethesda, MD 20892, (301) 435–1712, [ryansj@csr.nih.gov](mailto:ryansj@csr.nih.gov).

*Name of Committee:* Risk, Prevention and Health Behavior Integrated Review Group; Psychosocial Risk and Disease Prevention Study Section.

*Date:* September 25–26, 2017.

*Time:* 8:00 a.m. to 4:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Embassy Suites at the Chevy Chase Pavilion, 4300 Military Road NW., Washington, DC 20015.

*Contact Person:* Stacey FitzSimmons, Ph.D., MPH., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3114, MSC 7808, Bethesda, MD 20892, (301) 451–9956, [fitzsimmonss@csr.nih.gov](mailto:fitzsimmonss@csr.nih.gov).

*Name of Committee:* Healthcare Delivery and Methodologies Integrated Review Group; Health Services Organization and Delivery Study Section.

*Date:* September 25–26, 2017.

*Time:* 8:30 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Wyndham Grand Chicago Riverfront, 71 East Wacker Drive, Chicago, IL 60601.

*Contact Person:* Jacinta Bronte-Tinkew, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3164, MSC 7770, Bethesda, MD 20892, (301) 806–0009, [brontetinkewjm@csr.nih.gov](mailto:brontetinkewjm@csr.nih.gov).

*Name of Committee:* Center for Scientific Review Special Emphasis Panel; PAR–16–089: Imaging and Biomarkers for Early Detection of Aggressive Cancer.

*Date:* September 25, 2017.

*Time:* 1:00 p.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, Bethesda, MD 20852.

*Contact Person:* Xiang-Ning Li, MD, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5112, MSC 7854, Bethesda, MD 20892, 301–435–1744, [lixiang@csr.nih.gov](mailto:lixiang@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: August 21, 2017.

**Sylvia L. Neal,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017–18118 Filed 8–25–17; 8:45 am]

**BILLING CODE 4140–01–P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### Proposed Collection; 60-Day Comment Request: Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery (NICHD)

**AGENCY:** National Institutes of Health, Department of Health and Human Services.

**ACTION:** Notice.

**SUMMARY:** Eunice Kennedy Shriver National Institute of Child Health and Human Development, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public to take this opportunity to comment on the “Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery ” for approval under the Paperwork Reduction Act (PRA). This collection was developed as part of a Federal Government-wide effort to streamline the process for seeking feedback from the public on service delivery. This notice announces our intent to submit this collection to OMB for approval and solicits comments on specific aspects for the proposed information collection.

**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. Jennifer Guimond, Project Clearance Liaison, Office of Science Policy, Reporting, and Program Analysis, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National

Institutes of Health, 31 Center Drive, Room 2A18, Bethesda, Maryland 20892 or call non-toll-free number (301) 496–1877 or Email your request, including your address to: [Jennifer.guimond@nih.gov](mailto:Jennifer.guimond@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 minimize 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:* Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery (NICHD), 0925–0643, Expiration Date 10/31/2014, EXTENSION, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH).

*Need and Use of Information Collection:* There are no changes being requested for this submission. The proposed information collection activity provides a means to garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the Administration’s commitment to improving service delivery. By qualitative feedback we mean information that provides useful insights on perceptions and opinions, but are not statistical surveys that yield quantitative results that can be generalized to the population of study. This feedback will provide information about the NICHD’s customer or stakeholder perceptions, experiences and expectations, provide an early warning of issues with service, or focus attention on areas where communication, training or changes in operations might improve delivery of products or services. These collections will allow for ongoing, collaborative and actionable communications between the

NICHD and its customers and stakeholders. It will also allow feedback to contribute directly to the improvement of program management.

The solicitation of feedback will target areas such as: Timeliness, appropriateness, accuracy of information, courtesy, efficiency of service delivery, and resolution of issues with service delivery. Responses will be assessed to plan and inform efforts to improve or maintain the quality of service offered to the public. If this information is not collected, vital feedback from customers and stakeholders on the NICHD's services will be unavailable.

The NICHD will only submit a collection for approval under this generic clearance if it meets the following conditions:

- The collections are voluntary;
- The collections are low-burden for respondents (based on considerations of total burden hours, total number of respondents, or burden-hours per respondent) and are low-cost for both the respondents and the Federal Government;
- The collections are non-controversial and do not raise issues of concern to other Federal agencies;

- Any collection is targeted to the solicitation of opinions from respondents who have experience with the program or may have experience with the program in the near future;
- Personally identifiable information (PII) is collected only to the extent necessary and is not retained;
- Information gathered will be used only internally for general service improvement and program management purposes and is not intended for release outside of the agency;
- Information gathered will not be used for the purpose of substantially informing influential policy decisions; and
- Information gathered will yield qualitative information; the collections will not be designed or expected to yield statistically reliable results or used as though the results are generalizable to the population of study.

Feedback collected under this generic clearance provides useful information, but it does not yield data that can be generalized to the overall population. This type of generic clearance for qualitative information will not be used for quantitative information collections that are designed to yield reliably actionable results, such as monitoring trends over time or documenting

program performance. Such data uses require more rigorous designs that address: The target population to which generalizations will be made, the sampling frame, the sample design (including stratification and clustering), the precision requirements or power calculations that justify the proposed sample size, the expected response rate, methods for assessing potential non-response bias, the protocols for data collection, and any testing procedures that were or will be undertaken prior to fielding the study. Depending on the degree of influence the results are likely to have, such collections may still be eligible for submission for other generic mechanisms that are designed to yield quantitative results.

As a general matter, information collections will not result in any new system of records containing privacy information and will not ask questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

OMB approval is requested for 3 years. There are no costs to respondents other than their time. The total estimated annualized burden hours are 4,950.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of collection	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total annual burden hours
Conference/Training—Pre and Post Surveys .....	100	1	15/60	25
Usability Testing .....	100	1	30/60	50
Focus Groups .....	750	1	1	750
Customer Satisfaction Survey .....	13,500	1	15/60	3,375
In-depth Interviews or Small Discussion Group .....	750	1	1	750
<b>Total .....</b>	<b>15,200</b>	<b>15,200</b>	<b>.....</b>	<b>4,950</b>

Dated: August 23, 2017.

**Jennifer Guimond,**

*Project Clearance Liaison, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health.*

[FR Doc. 2017-18195 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Office of the Secretary Notice of Meeting**

Notice is hereby given of the cancellation of the Muscular Dystrophy Coordinating Committee meeting,

October 4, 2017, 8:30 a.m. to 4:30 p.m., National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Conference Room C/D, Bethesda, MD 20852 which was published in the **Federal Register** on August 11, 2017, 82 FR 37595, pages 37595-37596.

(Catalogue of Federal Domestic Assistance Program Nos. 93.853, Clinical Research Related to Neurological Disorders; 93.854, Biological Basis Research in the Neurosciences, National Institutes of Health, HHS)

Dated: August 22, 2017.

**Sylvia L. Neal,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18123 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**National Institute of Biomedical Imaging and Bioengineering; Notice of Closed Meeting**

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the National Institute of

### Biomedical Imaging and Bioengineering Special Emphasis Panel.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Institute of Biomedical Imaging and Bioengineering Special Emphasis Panel, NIBIB P41 Review (2018/01).

*Date:* September 17–19, 2017.

*Time:* 5:00 p.m. to 12:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Courtyard Los Angeles LA Live, 901 West Olympic Boulevard, Los Angeles, CA 90015.

*Contact Person:* Ruixia Zhou, Ph.D., Scientific Review Officer, 6707 Democracy Boulevard, Democracy Two Building, Suite 957, Bethesda, MD 20892, (301) 496-4773, [zhou@mail.nih.gov](mailto:zhou@mail.nih.gov).

Dated: August 22, 2017.

**Melanie J. Pantoja,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18122 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute of Biomedical Imaging and Bioengineering Notice of Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the National Advisory Council for Biomedical Imaging and Bioengineering.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the 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/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 and/or contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Advisory Council for Biomedical Imaging and Bioengineering NACBIB Council Meeting, September, 2017.

*Date:* September 12, 2017.

*Open:* 9:00 a.m. to 12:40 p.m.

*Agenda:* Report from the Institute Director, other Institute Staff and scientific presentation.

*Place:* The William F. Bolger Center, Franklin Building, Classroom 4, 9600 Newbridge Drive, Potomac, MD 20854.

*Closed:* 2:00 p.m. to 3:00 p.m.

*Agenda:* To review and evaluate grant applications and/or proposals.

*Place:* The William F. Bolger Center, Franklin Building, Classroom 4, 9600 Newbridge Drive, Potomac, MD 20854.

*Contact Person:* David T. George, Ph.D., Acting Associate Director, Office of Research Administration, National Institute of Biomedical Imaging and Bioengineering, 6707 Democracy Boulevard, Room 920, Bethesda, MD 20892.

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

Information is also available on the Institute's/Center's home page: <http://www.nibib1.nih.gov/about/NACBIB/NACBIB.htm>, where an agenda and any additional information for the meeting will be posted when available.

Dated: August 22, 2017.

**Melanie J. Pantoja,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18120 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute of Neurological Disorders and Stroke

Pursuant to section 10(a) of the Federal Advisory Committee Act, as amended, notice is hereby given of an Interagency Pain Research Coordinating Committee (IPRCC) meeting.

The meeting will feature invited speakers and discussions of committee business items including updates on the

Federal Pain Research Strategy and new pain initiatives.

The meeting will be open to the public and accessible by live webcast and conference call.

*Name of Committee:* Interagency Pain Research Coordinating Committee.

*Type of meeting:* Open Meeting.

*Date:* October 23, 2017.

*Time:* 8:30 a.m. to 4:30 p.m. \*Eastern Time\*—Approximate end time.

*Agenda:* The meeting will feature invited speakers and discussions of Committee business items including updates on the Federal Pain Research Strategy and new pain initiatives.

*Place:* National Institutes of Health, Building 31C, 6th Floor, Room 6, 31 Center Drive, Bethesda, MD 20892.

*Cost:* The meeting is free and open to the public.

*Webcast Live:* <http://videocast.nih.gov/>.

*Deadlines:* Notification of intent to present oral comments: Monday, October 17, 2017, by 5:00 p.m. ET. Submission of written/electronic statement for oral comments: Monday, October 17, 2017, by 5:00 p.m. ET. Submission of written comments: Monday, October 17, 2017, by 5:00 p.m. ET.

*Access:* Medical Center Metro (Red Line). Visitor Information: <http://www.nih.gov/about/visitor/index.htm>.

*Contact Person:* Linda L. Porter, Ph.D., Pain Policy Advisor, Office of Pain Policy, Officer of the Director, National Institute of Neurological Disorders and Stroke, NIH, 31 Center Drive, Room 8A31, Bethesda, MD 20892, Phone: (301) 451-4460, Email: [Linda.Porter@nih.gov](mailto:Linda.Porter@nih.gov).

Please Note: Any member of the public interested in presenting oral comments to the Committee must notify the Contact Person listed on this notice by 5:00 p.m. ET on Monday, October 17, 2017, with their request to present oral comments at the meeting. Interested individuals and representatives of organizations must submit a written/electronic copy of the oral statement/comments including a brief description of the organization represented by 5:00 p.m. ET on Monday, October 17, 2017.

Statements submitted will become a part of the public record. Only one representative of an organization will be allowed to present oral comments on behalf of that organization, and presentations will be limited to three to five minutes per speaker, depending on number of speakers to be accommodated within the allotted time. Speakers will be assigned a time to speak in the order of the date and time when their request to speak is received, along with the required submission of the written/electronic statement by the specified deadline. If special accommodations are needed, please email the Contact Person listed above.

In addition, any interested person may submit written comments to the IPRCC prior to the meeting by sending the comments to the Contact Person listed on this notice by 5:00 p.m. ET, Monday, October 17, 2017. The comments should include the name and, when applicable, the business or professional affiliation of the interested person. All written comments received by the deadlines

for both oral and written public comments will be provided to the IPRCC for their consideration and will become part of the public record.

The meeting will be open to the public and webcast live on the Internet. If you experience any technical problems with the webcast, please call the NIH IT Service Desk at (301) 496-4357, toll free (866) 319-4357, for webcast issues.

Individuals who participate in person or by using the web service and who need special assistance, such as captioning, should submit a request to the Contact Person listed on this notice at least seven days prior to the meeting.

As a part of security procedures, attendees should be prepared to present a photo ID during the security process to get on the NIH campus. For a full description, please see: <http://www.nih.gov/about/visitorsecurity.htm>.

Information about the IPRCC is available on the Web site: <http://iprcc.nih.gov/>.

Dated: August 23, 2017.

**Sylvia L. Neal,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18200 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute on Aging; 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:* National Institute on Aging Initial Review Group; Neuroscience of Aging Review Committee.

*Date:* October 5-6, 2017.

*Time:* 2:00 p.m. to 2:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda Marriott, 5151 Pooks Hill Road, Bethesda, MD 20814.

*Contact Person:* Greg Bissonette, Ph.D., Scientific Review Officer, National Institute on Aging, National Institutes of Health, Gateway Building, Suite 2W200, 7201 Wisconsin Avenue, Bethesda, MD 20892, 301-402-1622, [bissonettegb@mail.nih.gov](mailto:bissonettegb@mail.nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.866, Aging Research, National Institutes of Health, HHS)

Dated: August 23, 2017.

**Melanie J. Pantoja,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18198 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### Center For Scientific Review; Notice of Closed Meetings

Pursuant to section 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 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:* Oncology 2—Translational Clinical Integrated Review Group; Basic Mechanisms of Cancer Therapeutics Study Section.

*Date:* September 18-19, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Double Tree Suites by Hilton, 1707 Fourth Street, Santa Monica, CA 90401.

*Contact Person:* Lambratu Rahman Sesay, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6214, MSC 7804, Bethesda, MD 20892, 301-451-3493, [rahman-sesayl@csr.nih.gov](mailto:rahman-sesayl@csr.nih.gov).

*Name of Committee:* Surgical Sciences, Biomedical Imaging and Bioengineering Integrated Review Group; Biomedical Imaging Technology A Study Section.

*Date:* September 26-27, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda North Marriott Hotel & Conference Center, Montgomery County Conference Center Facility, 5701 Marinelli Road, North Bethesda, MD 20852.

*Contact Person:* Ruth Grossman, DDS, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5215, Bethesda, MD 20892, (301) 435-2409, [grossmanrs@mail.nih.gov](mailto:grossmanrs@mail.nih.gov).

*Name of Committee:* Surgical Sciences, Biomedical Imaging and Bioengineering

Integrated Review Group; Medical Imaging Study Section.

*Date:* September 26-27, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, Bethesda, MD 20852.

*Contact Person:* Xiang-Ning Li, MD, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5112, MSC 7854, Bethesda, MD 20892, 301-435-1744, [lixiang@csr.nih.gov](mailto:lixiang@csr.nih.gov).

*Name of Committee:* Surgical Sciences, Biomedical Imaging and Bioengineering Integrated Review Group; Clinical Molecular Imaging and Probe Development.

*Date:* September 26-27, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda North Marriott Hotel & Conference Center, Montgomery County Conference Center Facility, 5701 Marinelli Road, North Bethesda, MD 20852.

*Contact Person:* Donald Scott Wright, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5108, MSC 7854, Bethesda, MD 20892, (301) 435-8363, [wrightds@csr.nih.gov](mailto:wrightds@csr.nih.gov).

*Name of Committee:* Surgical Sciences, Biomedical Imaging and Bioengineering Integrated Review Group; Biomedical Imaging Technology B Study Section.

*Date:* September 26-27, 2017.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, Bethesda, MD 20852.

*Contact Person:* Mehrdad Mohseni, MD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5211, MSC 7854, Bethesda, MD 20892, 301-435-0484, [mohsenim@csr.nih.gov](mailto:mohsenim@csr.nih.gov).

*Name of Committee:* Cardiovascular and Respiratory Sciences Integrated Review Group; Lung Cellular, Molecular, and Immunobiology Study Section.

*Date:* September 26-27, 2017.

*Time:* 8:00 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Bahia Resort Hotel, 998 West Mission Bay Drive, San Diego, CA 92109.

*Contact Person:* George M. Barnas, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 2180, MSC 7818, Bethesda, MD 20892, 301-435-0696, [barnasg@csr.nih.gov](mailto:barnasg@csr.nih.gov).

*Name of Committee:* Center for Scientific Review, Special Emphasis Panel, PAR 16-304: Behavioral and Psychological Phenotypes Contributing to Obesity.

*Date:* September 26, 2017.

*Time:* 4:00 p.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Embassy Suites at the Chevy Chase Pavilion, 4300 Military Road NW., Washington, DC 20015.

*Contact Person:* Stacey FitzSimmons, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3114, MSC 7808, Bethesda, MD 20892, 301-451-9956, [fitzsimmons@csr.nih.gov](mailto:fitzsimmons@csr.nih.gov).

*Name of Committee:* Center for Scientific Review Special Emphasis Panel; PAR-17-275: Mammalian Models for Translational Research.

*Date:* September 27, 2017.

*Time:* 11:00 a.m. to 4:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

*Contact Person:* Careen K Tang-Toth, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6214, MSC 7804, Bethesda, MD 20892, (301)435-3504, [tothct@csr.nih.gov](mailto:tothct@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: August 22, 2017.

**Natasha M. Copeland,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2017-18119 Filed 8-25-17; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Substance Abuse and Mental Health Services Administration

#### Agency Information Collection Activities: Submission for OMB Review; Comment Request

Periodically, the Substance Abuse and Mental Health Services Administration (SAMHSA) will publish a summary of information collection requests under OMB review, in compliance with the Paperwork Reduction Act (44 U.S.C. Chapter 35). To request a copy of these documents, call the SAMHSA Reports Clearance Officer on (240) 276-1243.

#### Proposed Project: Evaluation of the Projects for Assistance in Transition From Homelessness (PATH) Program—New

SAMHSA is conducting the federally mandated Evaluation of the PATH program. The PATH grant program, created as part of the Stewart B. McKinney Homeless Assistance Amendments Act of 1990, is administered by SAMHSA's CMHS' Homeless Programs Branch. The PATH

program is authorized under Section 521 *et seq.* of the Public Health Service (PHS) Act, as amended. The SAMHSA PATH program funds each Fiscal Year the 50 states, the District of Columbia, Puerto Rico, and four U.S. Territories (the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands). The PATH grantees make grants to local, public and non-profit organizations to provide the PATH allowable services.

The SAMHSA Administrator is required under Section 528 of the PHS Act to evaluate the expenditures of PATH grantees at least once every three years to ensure they are consistent with legislative requirements and to recommend changes to the program design or operations.

The primary task of the PATH evaluation is to meet the mandates of Section 528 of the PHS Act. The second task of the PATH evaluation is to conduct additional data collection and analysis to further investigate the sources of variation in key program output and outcome measures that are important for program management and policy development. The PATH evaluation builds on the previous evaluation which was finalized in 2016 and was conducted as part of the National Evaluation of SAMHSA Homeless Programs. The PATH evaluation will use web surveys, telephone interviews and site visits to facilitate the collection of information regarding the structures and processes in place at the grantee and provider level. Data regarding the outputs and outcomes of the PATH program will be obtained from grantee applications, providers' intended use plans (IUPs) and from PATH annual report data, which is also required by Section 528 of the PHS Act and is approved under OMB No. 0930-0205.

*Web Surveys* will be conducted with all State PATH Contacts (SPCs) and staff from intermediary and PATH provider organizations. The *Web Surveys* will capture detailed and structured information in the following topics: Selection, monitoring and oversight of PATH providers; populations served; the PATH allowable or eligible services provided; sources for match funds; provision of training and technical assistance; implementation of Evidence Based Practices (EBPs) and innovative practices including SOAR; data reporting, use of data and the Homeless Management Information System (HMIS); and collaboration, coordination and involvement with Continuums of Care (CoCs) and other organizations.

The SPCs for all grantees (n = 56), the Project Directors from the PATH provider organizations (n = 500) and staff from the intermediary organizations (n = 28) will be contacted to complete the web surveys. The *Web Surveys* will be administered once.

*Site Visits* will be conducted with a purposive sample of PATH grantees and providers to collect more nuanced information than will be possible with the web survey. Semi-structured discussions will take place with the SPCs, grantee staff, PATH provider staff including the Project Director and other key management staffs, outreach workers, case managers and other clinical treatment staff, key stakeholders at the grantee and provider level and consumers. Five grantees will be selected for *Site Visits* and visited within each grantee will be one to two PATH providers. The *Site Visits* will be utilized to collect information regarding: Provider and state characteristics; practices and priorities; context within which the grantees and providers operate; and services available within the areas the providers operate. Also, discussed will be the successes, barriers, and strategies faced by PATH grantees and providers. Focus groups will be held with current or former consumers of the PATH program to obtain consumer perspectives regarding the impact of the programs. The *Site Visits* will be conducted once.

*Telephone Interviews* will be conducted with a sample of SPCs (n = 28) and intermediary (n = 14) and provider staff (n = 60) to explore through open-ended questions in greater detail, explanations for variations among providers in measures that are important for program management and policy development. The outputs of the PATH program include: The number of persons receiving PATH-funded services, outreached/contacted and enrolled; the number of services provided; and the number of referrals provided. The outcome evaluation will be limited, given limitations in available data and will include the number of persons referred to and attaining substance use treatment, primary health services, job training, educational services, housing services, housing placement assistance, income assistance, employment assistance and medical assistance. The *Telephone interviews* will be conducted once.

The estimated burden for the reporting requirements for the PATH evaluation is summarized in the table below.

## ANNUAL BURDEN TABLE

Instrument/activity	Number of respondents	Responses per respondent	Total responses	Hours per response	Total hour burden
<b>Web Surveys</b>					
SPC Web Survey .....	<sup>1</sup> 56	1	56	1	56
PATH Intermediary Web Survey .....	<sup>2</sup> 28	1	28	1	28
PATH Provider Web Survey .....	<sup>3</sup> 500	1	500	1	500
<b>Telephone Interviews</b>					
SPC Telephone Interview .....	<sup>4</sup> 28	1	28	1	28
PATH Intermediary Telephone Interview .....	<sup>5</sup> 14	1	14	1	14
PATH Provider Telephone Interview .....	<sup>6</sup> 60	1	60	1	60
<b>Site Visit Interviews</b>					
Opening Session with State Staff .....	<sup>7</sup> 25	1	25	2	50
SPC Session .....	<sup>8</sup> 5	1	5	2	10
State Stakeholder Session .....	<sup>9</sup> 25	1	25	1.5	37.5
Opening Session with PATH Provider Staff .....	<sup>10</sup> 50	1	50	2	100
PATH Provider PD Session .....	<sup>11</sup> 10	1	10	2	20
PATH Provider Direct Care Staff Session .....	<sup>12</sup> 50	1	50	2	100
Provider Stakeholder Session .....	<sup>13</sup> 50	1	50	1.5	75
Consumer Focus Groups .....	<sup>14</sup> 100	1	100	1.5	150
<b>Total</b> .....	<b>1,001</b>	.....	<b>1,001</b>	.....	<b>1,228.5</b>

<sup>1</sup> 1 respondent × 56 SPCs = 56 respondents.

<sup>2</sup> 1 respondent × 28 Intermediaries = 28 respondents.

<sup>3</sup> 1 respondent × 500 PATH providers = 500 respondents.

<sup>4</sup> 1 respondent × 28 SPCs = 28 respondents.

<sup>5</sup> 1 respondent × 14 Intermediaries = 14 respondents.

<sup>6</sup> 1 respondent × 60 PATH providers = 60 respondents.

<sup>7</sup> 5 respondents × 5 site visits = 25 respondents.

<sup>8</sup> 1 respondent × 5 site visits = 5 respondents.

<sup>9</sup> 5 respondents × 5 site visits = 25 respondents.

<sup>10</sup> 5 respondents × 10 site visits (2 providers per state) = 50 respondents.

<sup>11</sup> 1 respondent × 10 site visits (2 providers per state) = 10 respondents.

<sup>12</sup> 5 respondents × 10 site visits (2 providers per state) = 50 respondents.

<sup>13</sup> 5 respondents × 10 site visits (2 providers per state) = 50 respondents.

<sup>14</sup> 10 respondents × 10 site visits (10 Consumers per provider (2 providers per state) = 100 respondents.

Written comments and recommendations concerning the proposed collection should be sent by DATE to the SAMHSA Desk Officer at the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB). To ensure timely receipt of comments, and to avoid potential delays in OMB's receipt and processing of mail sent through the U.S. Postal Services, commenters are encouraged to submit their comments to OMB via email to: *OIRA\_Submission@omb.eop.gov*. Although commenters are encouraged to send their comments via email, commenters may also fax their comments to: 202-395-7285.

Commenters may also mail them to: Office of Management and Budget, Office of Information and Regulatory Affairs, New Executive Office Building, Room 10102, Washington, DC 20503.

**Summer King,**  
Statistician.

[FR Doc. 2017-18136 Filed 8-25-17; 8:45 am]

BILLING CODE 4162-20-P

## DEPARTMENT OF HOMELAND SECURITY

### U.S. Customs And Border Protection

#### Notice of Issuance of Final Determination Concerning Country of Origin of Tablet Computers for Health Mobile and Hub Platforms

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determination.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection ("CBP") has issued a final determination concerning the country of origin of tablet computers known as Vivify Health Mobile and Hub Platforms. Based upon the facts presented, CBP has concluded in the final determination that for purposes of U.S. Government procurement in the installation of proprietary software on tablet computer does not substantially transform the imported tablet computers.

**DATES:** The final determination was issued on August 22, 2017. A copy of the final determination is attached. Any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of this final determination within September 27, 2017.

**FOR FURTHER INFORMATION CONTACT:** Robert Dinerstein, Valuation and Special Programs Branch, Regulations and Rulings, Office of Trade (202-325-0132).

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on August 22, 2017, pursuant to subpart B of Part 177, Customs and Border Protection (CBP) Regulations (19 CFR part 177, subpart B), CBP issued a final determination concerning the country of origin of tablet computers which may be offered to the United States Government under an undesignated government procurement contract. This final determination, HQ H284523, was issued at the request of Vivify Health Inc. under procedures set forth at 19 CFR part 177, subpart B, which implements

Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511–18). In the final determination, CBP was asked to consider whether the loading of the specialized software onto a tablet computer that

Section 177.29, CBP Regulations (19 CFR 177.29), provides that notice of final determinations shall be published in the **Federal Register** within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 CFR 177.30), provides that any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the **Federal Register**.

Dated: August 22, 2017.

**Alice A. Kipel,**

*Executive Director, Regulations and Rulings,  
Office of Trade.*

**HQ H284523**

**August 22, 2017**

**OT:RR:CTF:VS: H2854523 RSD**

**CATEGORY:** Origin

Stuart P. Seidel, Esq.  
Baker & McKenzie LLP  
815 Connecticut Avenue,  
Washington, DC 20006–4078

**RE:** U.S. Government Procurement; Title III, Trade Agreements Act of 1979 (19 U.S.C. § 2511); Subpart B, Part 177, CBP Regulations; Tablet Computers, Health Mobile and Hub Platforms

Dear Mr. Seidel:

This is in response to your letter of March 20, 2017, on behalf of Vivify Health, Inc. (Vivify), requesting a final determination concerning the country origin of a product that you refer to as a “home health mobile platform and hub”, pursuant to subpart B of Part 177, U.S. Customs and Border Protection (CBP) Regulations (19 CFR 177.21, *et seq.*). Under the pertinent regulations, which implement Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. government. You state in your letter that this request is being made pursuant to a letter from the Department of Veterans Affairs (VA) to the prime contractor, Iron Bow Technologies, LLC (Iron Bow), requiring the filing of a request for a substantial transformation ruling from U.S. CBP.

As a domestic manufacturer, Vivify is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

**FACTS:**

The specific product at issue, referred to as the Vivify Mobile Device Platform and Hub Platform, begins as a tablet computer. The

tablet computers are produced in Vietnam by one of the leading tablet manufacturers. The tablets are intended for purchase by the Veterans Health Administration for use by patients at home who will collect their health data that is measured by other peripheral devices such as blood pressure monitors, blood glucose monitors etc. These other devices are not imported with the tablet.

Vivify’s supplier purchases the tablets in the United States from an authorized reseller. In the United States, one of Vivify’s Hub production partners partially disassembles the case and adds a Bluetooth speaker microphone array that was assembled in Hong Kong, an “on-the-go” USB hub manufactured in China, and the housing, custom designed in the United States and Israel and manufactured in California, USA and Israel. All the above Hub Platform sub-components are shipped to facilities in Texas and in California for a final test fit, assembly, configuration and, then shipped for Quality Assurance testing in Tempe Arizona.

In order to collect the health data from each patient/user, Vivify installs specialized software (Vivify Health Pathways) onto the tablet computers. According to the information provided, the software was developed entirely in the United States, at Vivify’s corporate headquarters in Plano, Texas at a cost of several million dollars using a team of more than 30 persons. The software enables patients to provide vital sign data and their responses to clinical questions. This application is installed on the tablet to meet the VA’s requirements for medical devices, including patient confidentiality and interoperability with VA systems and protocols. In addition, this software disables the generic applications that would be normally used on the tablets. After the patient data is collected, it is next forwarded to VA clinicians over the VA intranet.

**ISSUE:**

Whether the imported tablets are substantially transformed by the installation of Vivify’s proprietary software, so as to make them a product of the United States.

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use

distinct from that of the article or articles from which it was so transformed.

*See also* 19 CFR 177.22(a).

In rendering final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. *See* 19 CFR 177.21. In this regard, CBP recognizes that the Federal Acquisition Regulations restrict the U.S. Government’s purchase of products to U.S.-made or designated country end products for acquisitions subject to the Trade Agreements Act. *See* 48 CFR 25.403(c)(1). The Federal Acquisition Regulations define “U.S.-made end product” as “an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with name, character, or use distinct from that of the article or articles from which it was transformed.” *See* 48 CFR 25.003.

“The term ‘character’ is defined as ‘one of the essentials of structure, form, materials, or function that together make up and usually distinguish the individual.’” *Uniden America Corporation v. United States*, 120 F. Supp. 2d. 1091, 1096 (citations omitted) (Ct. Int’l Trade 2000), *citing National Hand Tool Corp. v. United States*, 16 Ct. Int’l Trade 308, 311 (1992). In *Uniden*, concerning whether the assembly of cordless telephones and the installation of their detachable A/C (alternating current) adapters constituted instances of substantial transformation, the Court of International Trade applied the “essence test” and found that “[t]he essence of the telephone is housed in the base and the handset.”

In *Data General v. United States*, 4 Ct. Int’l Trade 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States (predecessor to subheading 9802.00.80, Harmonized Tariff Schedule of the United States), the programming of a foreign PROM (Programmable Read-Only Memory chip) in the United States substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function, that is, its “memory” which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs were designed by a U.S. project engineer with many years of experience in “designing and building hardware.” In addition, the court noted that while replicating the program pattern from a “master” PROM may be a quick one-step process, the development of the pattern and the production of the “master” PROM required much time and expertise. The court noted that it was undisputed that programming altered the character of a PROM. The essence of the article, its interconnections or stored

memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device, possessing a desired distinctive circuit pattern, was no less a "substantial transformation" than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In *Texas Instruments v. United States*, 681 F.2d 778, 782 (CCPA 1982), the court observed that the substantial transformation issue is a "mixed question of technology and customs law." Accordingly, the programming of a device that confers its identity as well as defines its use generally constitutes a substantial transformation. See also Headquarters Ruling Letter ("HQ") 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system, and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions that allow it to perform certain functions that prevent piracy of software constitutes a substantial transformation); and, HQ 733085, dated July 13, 1990; but see HQ 732870, dated March 19, 1990 (formatting a blank diskette does not constitute a substantial transformation because it does not add value, does not involve complex or highly technical operations, and does not create a new or different product); and, HQ 734518, dated June 28, 1993 (motherboards are not substantially transformed by the implanting of the central processing unit on the board because, whereas in *Data General* use was being assigned to the PROM, the use of the motherboard has already been determined when the importer imported it).

HQ H258960, dated May 19, 2016, reviewed the country of origin of hardware components of certain transceivers in two scenarios that are instructive to the case at issue here. The hardware components of the transceivers were wholly manufactured in a foreign country and imported into the United States. In the first scenario, the transceivers were "blanks" and were completely non-functional and specialized proprietary software was developed and downloaded in the United States, making the transceivers functional and compatible with the OEM technology. In the second scenario, the transceivers were preprogrammed with a generic program that was replaced with the specialized proprietary software. It was argued that in both scenarios, the imported hardware was substantially transformed by the development, configuration, and downloading operations of the United States origin software. As in this case, the expenses for the work performed in the United States were noted to far outweigh the work performed abroad. In the first scenario, we found that the non-functional transceivers were substantially transformed as a result of downloading performed in the United States, with proprietary software developed in the United States. However, in the second scenario, it was determined that since the

transceivers had generic network functionality, programming them merely to customize their network compatibility would not actually change the identity of the imported transceivers. See also HQ H241177 *supra*. Accordingly, it was determined that the country where the last substantial transformation occurred was China or another Asian country where the hardware components were manufactured.

In this case, you contend that the software downloading operations performed in the United States transform the generic tablet computers into medical devices. You further explain that the cost of writing the software programming far outweighs the cost of the imported generic tablets. You emphasize that the U.S. operations disable the Android applications and install health monitoring software that cannot be undone by third parties during the normal course of operations. Therefore, you contend that this operation changes the classification of the tablet from Heading 8471 of the Harmonized Tariff Schedule of the United States (HTSUS) to a medical device of Heading 9018, HTSUS.

In essence, what is being done by the installation of the software in the United States, is to limit the original capacity of the imported tablets for the purpose of facilitating the reception, collection and transmission of a patient's medical data to VA clinicians for their review. The original tablet has the ability to perform these functions, but it was determined that for ease of use and for other reasons it is best to disable these functions and to consolidate them in one function via the specialized software. It is stated that the general functionality of the tablet is removed and replaced so that it is easier for patients to use the device and access the system. It is also stated that the security of the patient's medical data will be better protected.

It is clear that loading the specialized software onto the tablet computer that remains fully functional as a computer would be insufficient to constitute a new and different article of commerce, since all of the functionality of the original computer would be retained. In this case, however, in addition to the addition of the software, we are being asked to consider the effect of disabling the general applications that have been programmed onto the tablet. In our judgment, this added factor does not cause or require a different result. The functions of the original tablet produced in Vietnam that are necessary to receive and transmit data are in essence still present on the modified tablet, as aided by the software. While the tablet is no longer a freely programmable machine, we find the imposition of this limitation is insufficient to constitute a substantial transformation of the imported tablets.

Furthermore, we note that the converted tablets loaded with the Vivify Pathway Software do not actually measure any health related functions, such as blood pressure, or oxygen saturation levels, nor do they provide any medical treatment to patients. Instead, the converted tablets function to receive medical data that is obtained from other peripheral devices, such as a blood pressure cuff or an oxygen sensor, and to transmit that medical data to a clinician for review.

Therefore, it appears that after the proprietary software is downloaded onto the tablets, they function basically as a type of communications device.

It is also claimed that the FDA considers the Mobile Device Platform and the Hub Platform to be medical devices, and thus counsel contends that CBP should also consider the tablets loaded with the Vivify software to be medical devices rather than tablets. We note, however, that FDA's determinations on whether any items are considered medical devices are based upon different criteria from what CBP must apply in determining the country of origin of a product using the substantial transformation test. In HQ H019436, dated March 17, 2008, CBP considered the tariff classification of a SONA Sleep Apnea Avoidance Pillow (pillow), imported from China. The ruling noted that while the subject merchandise was considered a Class II therapeutic cervical pillow for snoring and mild sleep apnea by the FDA, this determination, did not control the tariff classification. Similarly in this case, the FDA's determination that the imported tablets are medical devices is of limited relevance to CBP's determination as to the country of origin of the devices.

In reviewing the processing performed in the United States on the imported tablets under consideration, we note that it is analogous to the situation of the transceivers described by the second scenario of HQ H258960. The imported tablets are preprogrammed with a generic program, which is the standard android operating system, prior to their importation. When they are first imported, the tablets can perform all of the standard functions of an android tablet, and could in their imported condition be used in conjunction with the proprietary software, but are customized for use. Accordingly, like the transceivers described in the second scenario of HQ H258960, we find that the name, character, and use of the imported tablet computers remain the same. Therefore, we further find that the imported tablets are not substantially transformed in the United States by the downloading of the proprietary software, which allows them to function with the VA Healthcare network. After the Vivify Health Pathways software is downloaded, the country of origin of the imported tablets remains the country where they were originally manufactured, which in this case is Vietnam.

#### **HOLDING:**

Based on the facts of this case, the imported tablets used with Home Health Hub platform are not substantially transformed by the installation of the proprietary Vivify Health Pathways software. Therefore, the country of origin of the tablets will remain the country where they were originally manufactured.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication

of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.  
Sincerely,

**Alice A. Kipel,**

*Executive Director Regulations and Rulings,  
Office of Trade.*

[FR Doc. 2017-18202 Filed 8-25-17; 8:45 am]

**BILLING CODE 9111-14-P**

## DEPARTMENT OF HOMELAND SECURITY

### U.S. Customs and Border Protection

#### Notice of Issuance of Final Determinations Concerning Certain Pharmaceutical Products

**AGENCY:** U.S. Customs and Border Protection, Department of Homeland Security.

**ACTION:** Notice of final determinations.

**SUMMARY:** This document provides notice that U.S. Customs and Border Protection (“CBP”) has issued six final determinations concerning the country of origin of certain pharmaceutical products produced by Lupin Pharmaceuticals, Inc. Based upon the facts presented, CBP has concluded that the country of origin of the meloxicam tablets is Italy for purposes of U.S. Government procurement, that the country of origin of the bimatoprost ophthalmic solution is Taiwan for purposes of U.S. Government procurement, that the country of origin of the niacin ER tablets is Belgium or Switzerland for purposes of U.S. Government procurement, that the country of origin of the calcium acetate capsules is the Netherlands for purposes of U.S. Government procurement, that the country of origin of the quinine sulfate capsules is Germany for purposes of U.S. Government procurement, and that the country of origin of the pravastatin sodium tablets is Taiwan for purposes of U.S. Government procurement.

**DATES:** These final determinations were issued on August 22, 2017. Copies of the final determinations are attached. Any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of these final determinations within September 27, 2017.

**FOR FURTHER INFORMATION CONTACT:** Ross M. Cunningham, Valuation and Special Programs Branch, Regulations and Rulings, Office of Trade, (202) 325-0034.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that on August 22, 2017

pursuant to subpart B of Part 177, U.S. Customs and Border Protection Regulations (19 CFR part 177, subpart B), CBP issued six final determinations concerning the country of origin of certain pharmaceutical products, which may be offered to the U.S. Government under an undesignated government procurement contract. These final determinations (HQ H284690, HQ H284961, HQ H284692, HQ H284694, HQ H284695, and HQ H284697), were issued under procedures set forth at 19 CFR part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511-18). In the final determinations, CBP concluded that the processing in India does not result in a substantial transformation. Therefore, the country of origin for purposes of U.S. Government procurement of the pharmaceutical products is the country in which the active pharmaceutical ingredient was produced.

Section 177.29, CBP Regulations (19 CFR 177.29), provides that a notice of final determination shall be published in the **Federal Register** within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 CFR 177.30), provides that any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the **Federal Register**.

Dated: August 22, 2017.

**Alice A. Kipel,**

*Executive Director, Regulations and Rulings,  
Office of Trade.*

ATTACHMENT A

HQ H284690

August 22, 2017

OT:RR:CTF:VS H284690 RMC

CATEGORY: Origin

Kevin J. Maynard  
Wiley Rein LLP  
1776 K St. NW  
Washington, DC 20006

Re: U.S. Government Procurement; Country of Origin of Meloxicam Tablets; Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin Pharmaceuticals, Inc. (“Lupin”) pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (“CBP”) Regulations (19 CFR Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 (“TAA”), as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated

country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of meloxicam tablets. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

#### FACTS:

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are meloxicam tablets, in doses of 7.5 milligrams and 15 milligrams, which you describe as “nonsteroidal anti-inflammatory[ies] used for the relief of the signs and symptoms of rheumatoid arthritis and osteoarthritis.”

The manufacturing process for Lupin’s meloxicam tablets begins in Italy, where the active pharmaceutical ingredient (“API”) meloxicam (chemical formula C<sub>14</sub>H<sub>13</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub>) is produced. You state that the Italian meloxicam is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients, which you describe as excipients. These ingredients are combined with the Italian API in India during the manufacturing process. The ingredients include the following chemicals, which you note are products of TAA-eligible countries:

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- [ ]
- [ ]
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The manufacturing process in India involves four steps. First, the API and inactive ingredients are sifted and blended. Second, the materials are granulated, and the wet granulates are then sieved and dried. Third, the product is compressed into tablets. Finally, in the fourth step, the finished tablets are packaged into approved packaging.

You state that the processes performed to produce the finished meloxicam tablets do not result in any change to the chemical characteristics of the Italian API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short, you characterize the Indian operations as mere processing of bulk API into 7.5 milligram and 15 milligram dosage form.

**ISSUE:**

What is the country of origin of the meloxicam tablets for purposes of U.S. Government procurement?

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining process that leaves the identity of the article intact. See *United States v. Gibson-Thomsen Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass’n v. United States*, 628 F.Supp. 978 (Ct. Int’l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. See, e.g., Headquarters Ruling (“HQ”) 561975, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we

held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product’s name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the United States did not result in a change in the product’s use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with Italian-origin bulk meloxicam and, after this product is combined with inactive ingredients from TAA-eligible countries in India, results in meloxicam tablets in individual doses of either 7.5 milligrams or 15 milligrams. Because the product is referred to as “meloxicam” both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the meloxicam maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form meloxicam had a predetermined medicinal use as a nonsteroidal anti-inflammatory, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is Italy, where the active ingredient was produced.

**HOLDING:**

The country of origin of the meloxicam tablets for purposes of U.S. Government procurement is Italy.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final

determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

*Executive Director, Regulations & Rulings,  
Office of Trade.*

ATTACHMENT B

HQ H284691

August 22, 2017

OT:RR:CTF:VS H284691 RMC

CATEGORY: Origin

Kevin J. Maynard  
Wiley Rein LLP  
1776 K St. NW  
Washington, DC 20006

Re: U.S. Government Procurement; Country of Origin of Bimatoprost Ophthalmic Solution; Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin Pharmaceuticals, Inc. (“Lupin”) pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (“CBP”) Regulations (19 CFR Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 (“TAA”), as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of bimatoprost ophthalmic solution. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

**FACTS:**

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are bimatoprost ophthalmic solution (0.03%), which you describe as “a ‘prostaglandin analog’ used to reduce elevated intraocular pressure.”

The manufacturing process for Lupin’s bimatoprost ophthalmic solution begins in Taiwan, where the active pharmaceutical ingredient (“API”) bimatoprost (chemical

formula C25H37NO4) is produced. You state that the Taiwanese bimatoprost is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients, which you describe as excipients. These ingredients are combined with the Taiwanese API in India during the manufacturing process. The ingredients include the following:

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The manufacturing processes performed in India include the following four steps: First, the weights of the API and inactive ingredients are verified. Second, the active and inactive ingredients are dissolved in water. Third, the inactive and active ingredient solutions are combined and the pH level is adjusted if necessary. Finally, in the fourth step, the solution is filtered and placed into approved packaging.

You state that the processes performed to produce the finished bimatoprost ophthalmic solution do not result in any change to the chemical characteristics of the Taiwanese API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short, you characterize the Indian operations as mere processing of bulk API into 0.03%-strength dosage form.

#### ISSUE:

What is the country of origin of the bimatoprost ophthalmic solution for purposes of U.S. Government procurement?

#### LAW AND ANALYSIS:

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed. *See also* 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining

process that leaves the identity of the article intact. *See United States v. Gibson-Thomson Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass’n v. United States*, 628 F.Supp. 978 (Ct. Int’l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. *See, e.g.*, Headquarters Ruling (“HQ”) 561975, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product’s name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the

United States did not result in a change in the product’s use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with Taiwanese-origin bulk bimatoprost and, after this product is combined with inactive ingredients in India, results in bimatoprost ophthalmic solution in 0.03%-strength form. Because the product is referred to as “bimatoprost” both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the bimatoprost maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form bimatoprost had a predetermined medicinal use as a “prostaglandin analog” used to reduce elevated intraocular pressure, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is Taiwan, where the active ingredient was produced.

#### HOLDING:

The country of origin of the bimatoprost ophthalmic solution for purposes of U.S. Government procurement is Taiwan.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

*Executive Director, Regulations & Rulings,  
Office of Trade.*

ATTACHMENT C

HQ H284692

August 22, 2017

OT:RR:CTF:VS H284692 RMC

CATEGORY: Origin

Kevin J. Maynard

Wiley Rein LLP

1776 K St. NW

Washington, DC 20006

Re: U.S. Government Procurement; Country  
of Origin of Niacin ER Tablets;  
Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin Pharmaceuticals, Inc. (“Lupin”) pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (“CBP”) Regulations (19 CFR part 177). Under these regulations, which implement Title III of the Trade

Agreements Act of 1979 (“TAA”), as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of niacin ER tablets. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

#### FACTS:

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are niacin ER tablets, in doses of 500 milligrams, 750 milligrams, and 1000 milligrams, which you describe as “an antihyperlipidemic agent . . . used in patients with primary hyperlipidemia and mixed dyslipidemia.”

The manufacturing process for Lupin’s niacin ER tablets begins in either Belgium or Switzerland, where the active pharmaceutical ingredient (“API”) nicotinic acid (chemical formula C<sub>6</sub>H<sub>5</sub>NO<sub>2</sub>) is produced. You state that the Belgian or Swiss nicotinic acid is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients, which you describe as excipients. These ingredients are combined with the Belgian or Swiss API in India during the manufacturing process. The ingredients include the following:

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The manufacturing processes performed in India include the following four steps: First, the API and inactive ingredients are sifted and blended. Second, the materials are granulated, and then sieved. Third, the blend is compressed into tablets and the tablets are coated. Finally, in the fourth step, the finished tablets are packaged into approved packaging.

You state that the processes performed to produce the finished niacin ER tablets do not result in any change to the chemical characteristics of the Belgian or Swiss API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short,

you characterize the Indian operations as mere processing of bulk API into 500-milligram, 750-milligram, and 1000-milligram dosage form.

#### ISSUE:

What is the country of origin of the niacin ER tablets for purposes of U.S. Government procurement?

#### LAW AND ANALYSIS:

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

*See also* 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining process that leaves the identity of the article intact. *See United States v. Gibson-Thomsen Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass’n v. United States*, 628 F.Supp. 978 (Ct. Int’l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. *See, e.g.*, Headquarters Ruling (“HQ”) 561975, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal

use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product’s name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the United States did not result in a change in the product’s use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with Belgian- or Swiss-origin bulk nicotinic acid and, after this product is combined with inactive ingredients in India, results in niacin ER tablets in individual doses of 500 milligrams, 750 milligrams, or 1000 milligrams. Although Lupin refers to the final product as niacin, it is also commonly known as nicotinic acid. *See* WebMD, *Niacin ER*, <http://webmd.com/drugs/2/drug-3745-9126/niacin-oral/niacin-extended-release-oral/details> (last visited June 22, 2017). Because the product is referred to as nicotinic acid both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the nicotinic acid maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form nicotinic acid had a predetermined medicinal use as an antihyperlipidemic agent, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is

Belgium or Switzerland, where the active ingredient was produced.

**HOLDING:**

The country of origin of the niacin ER tablets for purposes of U.S. Government procurement is Belgium or Switzerland.

ATTACHMENT D

HQ H284694

August 22, 2017

OT:RR:CTF:VS H284694 RMC

CATEGORY: Origin

Kevin J. Maynard  
Wiley Rein LLP  
1776 K St. NW  
Washington, DC 20006

Re: U.S. Government Procurement; Country of Origin of Calcium Acetate Capsules; Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin Pharmaceuticals, Inc. (“Lupin”) pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (“CBP”) Regulations (19 CFR Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 (“TAA”), as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of calcium acetate capsules. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

**FACTS:**

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are calcium acetate capsules, in doses of 667 milligrams, which you describe as a “‘antihyperphosphatemic’ or ‘phosphate binder’ that is used to reduce the levels of phosphate in the blood.”

The manufacturing process for Lupin’s calcium acetate capsules begins in the Netherlands, where the active pharmaceutical ingredient (“API”) calcium acetate (chemical formula C<sub>4</sub>H<sub>6</sub>CaO<sub>4</sub>) is produced. You state that the Dutch calcium acetate is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients. These ingredients

are combined with the Dutch API in India during the manufacturing process. The ingredients include the following:

- [ ]
- [ ]
- [ ]

The manufacturing processes performed in India include the following three steps: First, the API and inactive ingredients are sifted and blended. Second, the blend is filled in gelatin capsules. Finally, in the third step, the finished capsules are packaged into approved packaging.

You state that the processes performed to produce the finished calcium acetate capsules do not result in any change to the chemical characteristics of the Dutch API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short, you characterize the Indian operations as mere processing of bulk API into 667 milligram dosage form.

**ISSUE:**

What is the country of origin of the calcium acetate capsules for purposes of U.S. Government procurement?

**LAW AND ANALYSIS:**

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

*See also* 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining process that leaves the identity of the article intact. *See United States v. Gibson-Thomsen Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass’n v. United States*, 628 F.Supp. 978 (Ct. Int’l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of

pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. *See, e.g.*, Headquarters Ruling (“HQ”) 561975, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product’s name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the United States did not result in a change in the product’s use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with Dutch-origin bulk calcium acetate and, after this product is combined with inactive ingredients in India, results in calcium acetate capsules in individual doses of 667 milligrams. Because the product is referred to as “calcium

acetate" both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the calcium acetate maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form calcium acetate had a predetermined medicinal use as an antihyperphosphatemic or phosphate binder, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is the Netherlands, where the active ingredient was produced.

#### HOLDING:

The country of origin of the calcium acetate capsules for purposes of U.S. Government procurement is the Netherlands.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

*Executive Director, Regulations & Rulings,  
Office of Trade.*

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

*Executive Director, Regulations & Rulings,  
Office of Trade.*

#### ATTACHMENT E

HQ H284695

August 22, 2017

OT:RR:CTF:VS H284695 RMC

CATEGORY: Origin

Kevin J. Maynard

Wiley Rein LLP

1776 K St. NW

Washington, DC 20006

Re: U.S. Government Procurement; Country of Origin of Quinine Sulfate Capsules; Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin

Pharmaceuticals, Inc. ("Lupin") pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection ("CBP") Regulations (19 CFR Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 ("TAA"), as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of quinine sulfate capsules. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

#### FACTS:

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are quinine sulfate capsules, in doses of 324 milligrams, which you describe as "'cinchona alkaloid[s]' that [are] used for the treatment of malaria."

The manufacturing process for Lupin's quinine sulfate capsules begins in Germany, where the active pharmaceutical ingredient ("API") quinine sulfate (chemical formula ((C<sub>20</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>)<sub>2</sub>H<sub>2</sub>SO<sub>4</sub>H<sub>2</sub>O) is produced. You state that the German quinine sulfate is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients, which you describe as excipients. These ingredients are combined with the German API in India during the manufacturing process. The ingredients include the following:

- [ ]
- [ ]
- [ ]
- [ ]

The manufacturing processes performed in India include the following four steps: First, the API and inactive ingredients are sifted and blended. Second, the materials are granulated, and then sieved. Third, the blend is filled in gelatin capsules. Finally, in the fourth step, the finished capsules are packaged into approved packaging.

You state that the processes performed to produce the finished quinine sulfate capsules do not result in any change to the chemical characteristics of the German API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short, you characterize the Indian operations as mere processing of bulk API into 324 milligram dosage form.

#### ISSUE:

What is the country of origin of the quinine sulfate capsules for purposes of U.S. Government procurement?

#### LAW AND ANALYSIS:

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

*See also* 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining process that leaves the identity of the article intact. *See United States v. Gibson-Thomsen Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass'n v. United States*, 628 F.Supp. 978 (Ct. Int'l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. *See, e.g., Headquarters Ruling ("HQ") 561975*, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we

held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product's name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the United States did not result in a change in the product's use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with German-origin bulk quinine sulfate and, after this product is combined with inactive ingredients in India, results in quinine sulfate capsules in 324 milligram doses. Because the product is referred to as "quinine sulfate" both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the quinine sulfate maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form quinine sulfate had a predetermined medicinal use as an antimalarial drug, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is Germany, where the active ingredient was produced.

#### HOLDING:

The country of origin of the quinine sulfate capsules for purposes of U.S. Government procurement is Germany.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter

anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

*Executive Director, Regulations & Rulings,  
Office of Trade.*

ATTACHMENT F

HQ H284697

August 22, 2017

OT:RR:CTF:VS H284697 RMC

CATEGORY: Origin

Kevin J. Maynard

Wiley Rein LLP

1776 K St. NW

Washington, DC 20006

Re: U.S. Government Procurement; Country of Origin of Pravastatin Sodium Tablets; Substantial Transformation

Dear Mr. Maynard:

This is in response to your letter, dated March 20, 2017, requesting a final determination on behalf of Lupin Pharmaceuticals, Inc. ("Lupin") pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection ("CBP") Regulations (19 CFR Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 ("TAA"), as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of pravastatin sodium tablets. As a U.S. importer, Lupin is a party-at-interest within the meaning of 19 CFR 177.22(d)(1) and is entitled to request this final determination.

You have asked that certain information submitted in connection with this ruling request be treated as confidential. Inasmuch as this request conforms to the requirements of 19 CFR 177.2(b)(7), the request for confidentiality is approved. The information contained within brackets and all attachments to this ruling request, forwarded to our office, will not be released to the public and will be withheld from published versions of this ruling.

#### FACTS:

Lupin is a subsidiary of Lupin Limited, one of the five largest pharmaceutical companies in India. At issue in this case are pravastatin sodium tablets in doses of 10, 20, 40, and 80 milligrams, which you describe as a pharmaceutical product that is "an antilipimic agent that is used to reduce the risk of myocardial infarction."

The manufacturing process for Lupin's pravastatin sodium tablets begins in Taiwan, where the active pharmaceutical ingredient ("API") pravastatin sodium (chemical

formula C23H35NaO7) is produced. You state that the Taiwanese pravastatin sodium is the only active ingredient in the finished pharmaceutical product. However, the finished product contains a number of other inactive ingredients, which you describe as excipients. These ingredients are combined with the Taiwanese API in India during the manufacturing process. The ingredients include the following:

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

The manufacturing processes performed in India include the following three steps: First, the API and inactive ingredients are sifted and blended. Second, the blend is compressed into tablets and the tablets are coated. Finally, in the third step, the finished tablets are packaged into approved packaging.

You state that the processes performed to produce the finished pravastatin sodium tablets do not result in any change to the chemical characteristics of the Taiwanese API or to any other ingredients. You also state that the medicinal use, molecular formula, and solubility of the API are unchanged by the manufacturing operations in India. In short, you characterize the Indian operations as mere processing of bulk API into 10-, 20-, 40-, and 80-milligram dosage form.

#### ISSUE:

What is the country of origin of the pravastatin sodium tablets for purposes of U.S. Government procurement?

#### LAW AND ANALYSIS:

Pursuant to subpart B of Part 177, 19 CFR 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

*See also* 19 CFR 177.22(a).

A substantial transformation occurs when an article emerges from a process with a new name, character, and use different from that possessed by the article prior to processing. A substantial transformation will not result from a minor manufacturing or combining

process that leaves the identity of the article intact. See *United States v. Gibson-Thomsen Co.*, 27 C.C.P.A. 267 (1940); and *National Juice Products Ass'n v. United States*, 628 F.Supp. 978 (Ct. Int'l Trade 1986).

In determining whether a substantial transformation occurs in the manufacture of chemical products such as pharmaceuticals, CBP has consistently examined the complexity of the processing and whether the final article retains the essential identity and character of the raw material. To that end, CBP has generally held that the processing of pharmaceutical products from bulk form into measured doses does not result in a substantial transformation of the product. See, e.g., Headquarters Ruling ("HQ") 561975, dated April 3, 2002; HQ 561544, dated May 1, 2000; HQ 735146, dated November 15, 1993; HQ H267177, dated November 5, 2016; HQ H233356, dated December 26, 2012; and, HQ 561975, dated April 3, 2002.

For example, in HQ H267177, CBP held that Indian- and Chinese-origin Acyclovir was not substantially transformed in the United States when it was combined with excipients and processed into tablets. In that case, the Indian or Chinese Acyclovir was the only active pharmaceutical ingredient in the final product. Accordingly, we found that the processing performed in the United States did not result in a change in the medicinal use of the finished product. Furthermore, the Acyclovir maintained its chemical and physical characteristics and did not undergo a change in name, character, or use. Consistent with our previous rulings, we held that processing the Acyclovir into dosage form and packaging it for sale in the United States did not constitute a substantial transformation. Accordingly, the country of origin of the final product for purposes of U.S. Government procurement was either China or India, where the active ingredient was produced.

Similarly, in HQ H233356, CBP held that the processing and packaging of imported mefenamic acid into dosage form in the United States did not constitute substantial transformation. Based on previous CBP rulings, we found that the specific U.S. processing—which involved blending the active ingredients with inactive ingredients in a tumbler and then encapsulating and packaging the product—did not substantially transform the mefenamic acid because its chemical character remained the same. Accordingly, we held that the country of origin of the final product was India, where the mefenamic acid was produced.

In HQ 561975, we also held that the processing of imported bulk Japanese-origin anesthetic drugs into dosage form in the United States did not constitute substantial transformation. Although the bulk form of the drug underwent testing operations, filtering, and packaging in the United States, these processes did not change the chemical or physical properties of the drug. Furthermore, there was no change in the product's name, which was referred to as sevoflurane in both its bulk and processed form. Additionally, because the imported bulk drug had a predetermined medicinal use as an anesthetic drug, the processing in the

United States did not result in a change in the product's use. The country of origin of the finished product was therefore Japan.

Here, as in the cases cited above, the processing of bulk imported pharmaceuticals into dosage form will not result in a substantial transformation. In this case, the processing begins with Taiwanese-origin bulk pravastatin sodium and, after this product is combined with inactive ingredients in India, results in pravastatin sodium tablets in individual doses of 10, 20, 40, or 80 milligrams. Because the product is referred to as "pravastatin sodium" both before and after the Indian processing, no change in name occurs in India. Furthermore, no change in character occurs in India because the pravastatin sodium maintains the same chemical and physical properties both before and after the Indian processing. Finally, because the imported, bulk-form pravastatin sodium had a predetermined medicinal use as an antilipimic agent that is used to reduce the risk of myocardial infarction, no change in use occurs after processing in India. Under these circumstances, and consistent with previous CBP rulings, we find that the country of origin of the final product is Taiwan, where the active ingredient was produced.

#### HOLDING:

The country of origin of the pravastatin sodium tablets for purposes of U.S. Government procurement is Taiwan.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,  
Executive Director,  
Regulations & Rulings,  
Office of Trade.

[FR Doc. 2017-18205 Filed 8-25-17; 8:45 am]

**BILLING CODE 9111-14-P**

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## INTER-AMERICAN FOUNDATION

### Sunshine Act Meetings

**TIME AND DATE:** September 6, 2017, 11:00 a.m.–12:00 p.m.

**PLACE:** Via tele-conference hosted at Inter-American Foundation, 1331 Pennsylvania Ave. Suite 1200, NW., Washington, DC 20004.

**STATUS:** Meeting of the Board of Directors, Open to the public.

**MATTERS TO BE CONSIDERED:** Next steps for updating advisory council membership.

The role of the Board in funding decisions.

**FOR DIAL-IN INFORMATION CONTACT:** Karen Vargas, Executive Assistant, (202) 524-8869.

**CONTACT PERSON FOR MORE INFORMATION:** Paul Zimmerman, General Counsel, (202) 683-7118.

**Paul Zimmerman,**  
General Counsel.

[FR Doc. 2017-18263 Filed 8-24-17; 4:15 pm]

**BILLING CODE 7025-01-P**

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

[FWS-R8-ES-2017-N084; FF08EVEN00-FXFR1337088SSO0]

### Marine Mammal Protection Act; Stock Assessment Report for the Southern Sea Otter in California

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of availability; response to comments.

**SUMMARY:** In accordance with the Marine Mammal Protection Act of 1972, as amended (MMPA), and its implementing regulations, we, the U.S. Fish and Wildlife Service (Service), announce that we have revised our stock assessment report (SAR) for the southern sea otter stock in the State of California, including incorporation of public comments. We now make our final revised SAR available to the public.

**ADDRESSES:** *Document Availability:* You may obtain a copy of the SAR from our Web site at <https://www.fws.gov/ventura/endangered/species/info/ssa.html>. Alternatively, you may contact the Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura, CA 93003; telephone: 805-644-1766.

**FOR FURTHER INFORMATION CONTACT:** For information on the methods, data, and results of the stock assessment, contact Lilian Carswell by telephone (805-677-3325) or by email ([Lilian\\_Carswell@fws.gov](mailto:Lilian_Carswell@fws.gov)). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800-877-8339.

**SUPPLEMENTARY INFORMATION:** We are announcing the availability of the final revised SAR for the southern sea otter (*Enhydra lutris nereis*) stock in the State of California.

### Background

Under the MMPA (16 U.S.C. 1361 *et seq.*) and its implementing regulations

in the Code of Federal Regulations (CFR) at 50 CFR part 18, we regulate the taking; import; and, under certain conditions, possession; transportation; purchasing; selling; and offering for sale, purchase, or export, of marine mammals. One of the goals of the MMPA is to ensure that stocks of marine mammals occurring in waters under U.S. jurisdiction do not experience a level of human-caused mortality and serious injury that is likely to cause the stock to be reduced below its *optimum sustainable population* (OSP) level. OSP is defined under the MMPA as “the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element” (16 U.S.C. 1362(9)).

To help accomplish the goal of maintaining marine mammal stocks at their OSPs, section 117 of the MMPA requires the Service and the National Marine Fisheries Service (NMFS) to prepare a SAR for each marine mammal stock that occurs in waters under U.S. jurisdiction. Each SAR must include:

1. A description of the stock and its geographic range;
2. A minimum population estimate, current and maximum net productivity rate, and current population trend;
3. An estimate of annual human-caused mortality and serious injury by source and, for a strategic stock, other factors that may be causing a decline or impeding recovery of the stock;
4. A description of commercial fishery interactions;
5. A categorization of the status of the stock; and
6. An estimate of the *potential biological removal* (PBR) level.

The MMPA defines the PBR as “the maximum number of animals, not

including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its [OSP]” (16 U.S.C. 1362(20)). The PBR is the product of the minimum population estimate of the stock ( $N_{min}$ ); one-half the maximum theoretical or estimated net productivity rate of the stock at a small population size ( $R_{max}$ ); and a recovery factor ( $F_r$ ) of between 0.1 and 1.0. This can be written as:

$$PBR = (N_{min})^{(1/2 \text{ of the } R_{max})}(F_r)$$

Section 117 of the MMPA requires the Service and NMFS to review the SARs (a) at least annually for stocks that are specified as strategic stocks, (b) at least annually for stocks for which significant new information is available, and (c) at least once every 3 years for all other stocks. If our review of the status of a stock indicates that it has changed or may be more accurately determined, then the SAR must be revised accordingly.

A *strategic stock* is defined in the MMPA as a marine mammal stock “(A) for which the level of direct human-caused mortality exceeds the [PBR] level; (B) which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the Endangered Species Act of 1973 [as amended] (16 U.S.C. 1531 *et seq.*) [the “ESA”], within the foreseeable future; or (C) which is listed as a threatened species or endangered species under the [ESA], or is designated as depleted under [the MMPA]” (16 U.S.C. 1362(19)).

**Stock Assessment Report History for the Southern Sea Otter in California**

The southern sea otter SAR was last revised in 2014. Because the southern sea otter qualifies as a strategic stock

due to its listing as a threatened species under the ESA, the Service reviewed the stock assessment in 2015. The review concluded that the status had not changed, nor could it be more accurately determined. However, upon review in 2016, the Service determined that revision was warranted.

Before releasing our draft SAR for public review and comment, we submitted it for technical review internally and for scientific review by the Pacific Regional Scientific Review Group, which was established under the MMPA (16 U.S.C. 1386(d)). In a December 6, 2016 (81 FR 87951), **Federal Register** notice, we made our draft SAR available for the MMPA-required 90-day public review and comment period. Following the close of the comment period, we revised the SAR based on public comments we received (see Response to Public Comments) and prepared the final revised SAR. Between publication of the draft and final revised SARs, we have not revised the status of the stock itself (the southern sea otter continues to retain its status as a strategic stock). However, we have updated the SAR to include the most recent information available.

**Summary of Final Revised Stock Assessment Report for the Southern Sea Otter in California**

The following table summarizes some of the information contained in the final revised SAR for southern sea otters in California, which includes the stock’s  $N_{min}$ ,  $R_{max}$ ,  $F_r$ , PBR, annual estimated human-caused mortality and serious injury, and status:

SUMMARY—FINAL REVISED STOCK ASSESSMENT REPORT FOR THE SOUTHERN SEA OTTER IN CALIFORNIA

Southern sea otter stock	$N_{MIN}$	$R_{MAX}$	$F_R$	PBR	Annual estimated human-caused mortality and serious injury	Stock status
Mainland .....	3,194	0.06	0.1	9.58	Figures by specific source, where known, are provided in the SAR.	Strategic.
San Nicolas Island	78	0.13	0.1	0.51		
Summary .....	3,272	.....	.....	10		

**Response to Public Comments**

We received comments on the draft SAR from the Marine Mammal Commission (Commission), Friends of the Sea Otter, and the Humane Society of the United States. We present substantive issues raised in those comments that are pertinent to the SAR,

edited for brevity, along with our responses below.

*Comment 1:* Without adequate observer coverage to document the rate at which sea otters are being caught in crab and lobster gear, it is not possible to know if modifications to these traps should be required. Therefore, the Commission recommends that the

Service collaborate with NMFS and the California Department of Fish and Wildlife (CDFW) to (1) establish an observer program with adequate coverage to obtain reliable information on the rate and circumstances under which sea otters are being taken in crab and lobster trap fisheries operating within the range of the southern sea

otter, or (2) implement a precautionary requirement for all trap gear to be modified to reduce the probability of sea otter bycatch to near zero.

*Response:* We recognize that the probability of bycatch in trap fisheries will rise as the southern sea otter expands its range to the north, increasing overlap with the Dungeness crab fishery, and to the south, increasing overlap with the spiny lobster fishery and finfish trap fishery in southern California. We will continue to work with CDFW and other partners to assess the best means of testing and, if appropriate, implementing precautionary trap modifications in the fisheries that may interact with sea otters. We note that, based on tests that have occurred to date, relatively minor modifications to Dungeness crab traps (reducing the fyke opening from 4 × 9 inches (10.2 × 22.9 cm) to 3 × 9 inches (7.6 × 22.9 cm)) would exclude most independent (post-weaning) sea otters while not impeding the capture of crabs (Hatfield et al. 2011). Comparable modifications have not been identified for spiny lobster traps or the large-fyke finfish traps used in southern California. While observer programs would increase our opportunity to detect bycatch, analyses indicate that high levels of observer effort would be required to avoid false-negative conclusions, even if the rate of bycatch mortality is substantial enough to reduce the population growth rate (Hatfield et al. 2011). We will continue to work with USGS, NMFS, and CDFW to explore options for assessing sea otter bycatch.

*Comment 2:* Figure 3 in the draft SAR shows an increasing trend in the number of strandings as a proportion of the spring count of sea otters (termed “relative mortality” in the report), from roughly 5 percent in the late 1980s to 12 percent in the past 4 years. The draft SAR attributes this pattern largely to the increase in shark-bite mortality at the peripheries of the southern sea otter’s range. However, this interpretation assumes that search effort and stranding rates have not increased, an assumption that is not addressed in the report. The Service should address all of the factors that could explain the apparent increase in the relative number of strandings.

*Response:* We have added a discussion of other factors that could explain the increase in the relative number of strandings and the relative frequency of shark-bitten carcasses.

*Comment 3:* The Service should place greater emphasis on the fact that the “relative mortality” rate is an underestimate of the true mortality rate because a substantial portion of

carcasses likely never strand or are never found, as has been demonstrated in this and other sea otter populations.

*Response:* We have added text emphasizing that relative mortality is an index of mortality and an underestimate of the true mortality rate.

*Comment 4:* An effective opportunity for public review and comment cannot occur if the public does not have access to all of the sources of information used to produce a draft stock assessment. The draft SAR contains numerous references to sources of information that are not easily available to the public. The Service should consider implementing a policy regarding the use of different data/information sources that would ensure that those sources have been reviewed and are easily available to the public. The Commission understands that in some cases the best available science has not been reviewed and published. In those cases, if the Service uses such information in an SAR, it should make the information easily available to the public.

*Response:* We utilize peer-reviewed publications whenever possible. However, when the best available science on a topic of direct importance to the SAR has not yet been reviewed and published, we believe it is preferable to present that information to the public rather than to withhold it. We may cite an informal source when new scientific information becomes available and update the citation in a subsequent revision of the SAR when that information has been reviewed and published. We have updated several such citations in the final SAR. Our notice of availability (81 FR 87951; December 6, 2016) includes contact information, which is made available for the use of anyone wishing to obtain additional information, including any of the sources of information referenced in the SAR.

*Comment 5:* In accordance with section 117(c)(1)(A) of the MMPA, the Service may review a stock’s status annually and update its stock assessment report only when it considers it appropriate to do so. However, given the rapid changes that are ongoing within the current and historical range of the southern sea otter, the failure of the population to expand its range significantly in the past 20 years, and the sudden shifts in count trajectories in different parts of the range over the last few years, the Commission recommends that the U.S. Fish and Wildlife Service make its stock assessment reviews available yearly to the appropriate Scientific Review Group (SRG) and the Commission, at a minimum, from this point forward.

*Response:* We typically provide a presentation to the Pacific SRG on the status of the southern sea otter even in years when we determine that a revision of the SAR is not warranted. We will continue to make such presentations and, from this point forward, will provide our reasoning to the Pacific SRG and Commission in years when we determine that a revision of the SAR is not warranted.

*Comment 6:* “Stock definition and geographic range” must be expanded to include the importance of range expansion in southern sea otter survival and recovery.

*Response:* We have added text emphasizing the importance of range expansion to recovery of the southern sea otter and referencing Service documents that discuss the subject in greater detail.

*Comment 7:* “Current population trend” should be revised to include the declining trend in the southern portion of the range due to shark bite mortality.

*Response:* We have added text that describes the regional declining trends and their relationship to increases in shark bite mortality.

*Comment 8:* The SAR should identify shark bite mortality as a factor impeding the recovery of the southern sea otter and encourage the close monitoring of this significant trend. The Service should confirm that delisting would not be appropriate even if the delisting threshold of 3,090 animals is met for 3 consecutive years unless the threat posed by shark bites has been addressed.

*Response:* We will continue to monitor shark-bite mortality through the stranding and necropsy programs led by USGS and CDFW, and we have added text that makes more explicit the relationship between high rates of shark-bite mortality and the lack of range expansion. However, we do not believe that the SAR is the appropriate document in which to discuss threats to the species in comprehensive detail or to make recommendations regarding delisting. We will update our assessment of the status of the southern sea otter in relation to the five threat factors described in section 4(a)(1) of the ESA in the next 5-year review.

*Comment 9:* “Status of Stock” should be discussed in relation to the five statutory delisting criteria and the recovery plan, in addition to optimum sustainable population (OSP) under the MMPA, noting that OSP has been discussed for the California coast but should also be considered on a range-wide basis, after accounting for the possible need to avoid interbreeding

between northern and southern sea otters.

*Response:* As noted in our response to Comment 8, we do not believe that the SAR is the appropriate document in which to discuss threats to the species in comprehensive detail. However, we have added text that references our most recent 5-year review (Service 2015). We have also added text clarifying that a formal determination of OSP will be developed with reference to the entire historic range of the subspecies.

*Comment 10:* “Habitat issues” should be revised to include (1) the spatial structure of southern sea otter habitat and its contribution in preventing recovery of the species and (2) a detailed discussion of the risk posed by oil spills.

*Response:* We have added text clarifying the relationship between the pace of range expansion, the spatial structure of sea otter habitat, and oil spill risk. However, as noted in our response to Comments 8 and 9, we do not believe that the SAR is the appropriate document in which to discuss threats to the species in comprehensive detail. We address oil spill risk and the effects of the spatial structure of sea otter habitat on population growth in our most recent 5-year review (Service 2015). We will update our assessment of these and other factors in the next 5-year review.

*Comment 11:* There are recent reports of what appear to be increasing rates of shooting-related incidents. For example, in 2016 alone there were reports of at least three sea otters being shot. In 2015, a California man was sentenced for shooting an air rifle at sea otters. While these incidents are more recent than the time period of the SAR, which is largely through 2014, they do represent the most recent available information and should be considered for inclusion since the Service provided information on some deaths as recently as 2016.

*Response:* We have added text stating that three sea otters died of gunshot wounds in 2016. However, we do not include these mortalities in the current calculation of mean annual mortality because they occurred outside the 5-year analysis window (2011–2015).

**Additional References Cited**

Chinn, S.M., M.A. Miller, M.T. Tinker, M.M. Staedler, F.I. Batac, E.M. Dodd, L.A. Henkel. 2016. The high cost of motherhood: end-lactation syndrome in southern sea otters. *Journal of Wildlife Diseases* 52:307–318. doi: 10.7589/2015-06-158.

Lafferty, K.D. M.T. and Tinker. 2014. Sea otters are recolonizing southern California in fits and starts. *Ecosphere* 5:50. <http://dx.doi.org/10.1890/ES13-00394.1>.

Tinker, M.T. 2014. Models and sea otter conservation. Pp. 257–300 in Larson, S., G. VanBlaricom and J. Bodkin, eds., *Sea Otter Conservation*. New York: Elsevier.

Tinker, M.T., and B.B. Hatfield. 2016. California sea otter (*Enhydra lutris nereis*) census results, spring 2016. U.S. Geological Survey Data Series 1018. 10 pp. <http://dx.doi.org/10.3133/ds1018>.

**Authority**

The authority for this action is the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*)

Dated: July 26, 2017.

**Gregory Sheehan,**

*Acting Director, U.S. Fish and Wildlife Service.*

[FR Doc. 2017-18169 Filed 8-25-17; 8:45 am]

**BILLING CODE 4333-15-P**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

[Docket No. FWS-HQ-IA-2017-0054; FXIA1671090000-156-FF09A30000]

**Foreign Endangered Species and Marine Mammals Issuance of Permits**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of issuance of permits.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), have issued the following permits to conduct certain activities with endangered species, marine mammals, or both. We issue these permits under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA).

**ADDRESSES:** Documents and other information submitted with these applications are available for review, subject to the requirements of the Privacy Act and Freedom of Information Act, by any party who submits a written request for a copy of such documents to the U.S. Fish and Wildlife Service, Division of Management Authority, Branch of Permits, MS: IA, 5275 Leesburg Pike, Falls Church, VA 22041; fax (703) 358-2281. To locate the **Federal Register** notice that announced our receipt of the application for each permit listed in this document, go to [www.regulations.gov](http://www.regulations.gov) and search on the permit number provided in the tables in **SUPPLEMENTARY INFORMATION**.

**FOR FURTHER INFORMATION CONTACT:** Joyce Russell, (703) 358-2023 (telephone); (703) 358-2281 (fax); or [DMAFR@fws.gov](mailto:DMAFR@fws.gov) (email).

**SUPPLEMENTARY INFORMATION:** On the dates below, as authorized by the provisions of the ESA, as amended (16 U.S.C. 1531 *et seq.*), we issued requested permits subject to certain conditions set forth therein. For each permit for an endangered species, we found that (1) the application was filed in good faith, (2) the granted permit would not operate to the disadvantage of the endangered species, and (3) the granted permit would be consistent with the purposes and policy set forth in section 2 of the ESA.

Permit No.	Applicant	Receipt of application <b>Federal Register</b> notice	Permit issuance date
<b>Endangered Species</b>			
50819A .....	Zoological Society of San Diego/San Diego Zoo Global .....	82 FR 24381; May 26, 2017 .....	June 30, 2017.
18137C .....	University of Wisconsin-Madison .....	82 FR 24381; May 26, 2017 .....	July 3, 2017.
75285A .....	Michael Ryckamn .....	82 FR 24381; May 26, 2017 .....	June 29, 2017.
14745C .....	Cleveland Metroparks Zoo .....	82 FR 24381; May 26, 2017 .....	July 11, 2017.
06369C .....	Indiana Purdue University .....	82 FR 14742, March 22, 2017 .....	July 3, 2017.
<b>Marine Mammals</b>			
80164B .....	North Slope Borough Department of Wildlife Management ...	81 FR 95628; December 28, 2016 .....	July 3, 2017.

**Authority:** We issue this notice under the authority of the ESA, as amended (16 U.S.C. 1531 *et seq.*), and the MMPA, as amended (16 U.S.C. 1361 *et seq.*).

**Joyce Russell,**

*Government Information Specialist, Branch of Permits, Division of Management Authority.*

[FR Doc. 2017-18209 Filed 8-25-17; 8:45 am]

**BILLING CODE 4333-15-P**

**DEPARTMENT OF THE INTERIOR**

**Bureau of Land Management**

[16XL LLWY920000.L51010000.ER0000.LVRWK09K0990.241A.0 4500106832]

**Notice of Intent To Prepare an Environmental Assessment To Reconsider the January 19, 2017, Record of Decision Approving Segments 8 and 9 for the Gateway West Transmission Line Project, Idaho**

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Notice.

**SUMMARY:** In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), and the Federal Land Policy and Management Act of 1976, as amended (FLPMA), and the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) Boundary Modification Act of 2017 (Modification Act), the Bureau of Land Management (BLM) is reconsidering the decision to approve a Right-of-Way (ROW) application for Segments 8 and 9 of the Gateway West 500-kilovolt (kV) Transmission Line Project (Project). By this Notice the BLM announces the beginning of scoping to solicit public comments and identify issues associated with such reconsideration, including the potential amendment of several Resource Management Plans (RMPs) and Management Framework Plans (MFPs) in the project area. The BLM analyzed the impacts of the alternative that it is reconsidering in the 2016 Gateway West Final Supplemental Environmental Impact Statement (EIS). The BLM will prepare an Environmental Assessment (EA) to reconsider the January 19, 2017 Decision, including the land use plan amendments associated with a specific action alternative identified in the Supplemental EIS.

**DATES:** Comments on issues may be submitted in writing until September 27, 2017. In order to be included in the analysis, all comments must be postmarked prior to the close of the 30-day scoping period.

**ADDRESSES:** You may submit comments on issues and planning criteria related

to this EA by any of the following methods:

- **Web site:** <https://www.blm.gov/gatewaywest>
- **Email:** [blm\\_id\\_gateway\\_west@blm.gov](mailto:blm_id_gateway_west@blm.gov)
- **Fax:** 208-384-3326
- **Mail:** BLM Boise District Office, 3948 Development Ave., Boise, ID 83705

Documents pertinent to this proposal may be examined at the BLM Boise District Office, 3948 Development Ave., Boise, ID 83705.

**FOR FURTHER INFORMATION:** Contact Courtney Busse by calling 208-373-3872 or emailing at [cbusse@blm.gov](mailto:cbusse@blm.gov). You can also contact Ms. Busse to have your name added to the BLM mailing list for the Project. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339 to contact Ms. Busse. The FRS is available 24 hours a day, 7 days a week, to leave a message or question with Ms. Busse. You will receive a reply during normal business hours.

**SUPPLEMENTARY INFORMATION:** PacifiCorp, dba Rocky Mountain Power, and Idaho Power (Proponents) submitted an initial ROW application under FLPMA in 2007 to locate 500-kV electric transmission lines on Federal lands as part of the Project. The original Project comprised 10 transmission line segments originating at the Windstar Substation near Glenrock, Wyoming, and terminating at the Hemingway Substation near Melba, Idaho.

After completing NEPA analysis in an EIS, the BLM issued a Record of Decision (ROD) in November 2013 that authorized routes and associated land use plan amendments on Federal lands for Segments 1 through 7, and Segment 10, but the BLM deferred a Decision for Segments 8 and 9 in southwestern Idaho.

In August 2014, the BLM received from the Proponents a revised ROW application for Segments 8 and 9 and a revised Plan of Development for the Project, which the BLM determined required additional NEPA analysis through a Supplemental EIS. On October 7, 2016, the BLM released a Final Supplemental EIS that analyzed seven alternative ROW routes for Segments 8 and 9 and the land use plan amendments needed to accommodate each alternative route pair. The BLM issued a ROD on January 19, 2017, selecting the route described as Alternative 5 in the Final Supplemental EIS.

Following the Decision, several environmental organizations, the State of Idaho, and Owyhee County, Idaho, appealed the ROW Decision to the

Interior Board of Land Appeals (IBLA). In a letter to the Secretary of the Interior, the Governor of Idaho requested that the BLM reconsider the January 19, 2017, Decision and select an alternative with fewer impacts to State and county resources and communities. The Proponents also requested that the BLM reconsider the January Decision and possibly select the alternative proposed in their revised application, as more cost-effective and providing greater system reliability. On April 18, 2017, the IBLA granted BLM's Motion to Remand the January 19, 2017, Decision for reconsideration. The BLM's Motion was unopposed.

On May 4, 2017, Congress passed the Consolidated Appropriations Act, 2017 (H.R. 244), which incorporated the Morley Nelson Snake River Birds of Prey NCA Boundary Modification Act (Modification Act) by reference (Division G, Title IV, Sec. 431(a)).

The President signed the Appropriations Act into law on May 5, 2017. The Modification Act directed the BLM to issue a ROW grant for the lands described in Sec. (b)(2) of the Modification Act for portions of Gateway West Segments 8 and 9, which represent the portions of Alternative 1 from the Final Supplemental EIS within the boundaries of the NCA. The Modification Act also removed the lands for this ROW from NCA status and stipulated that the mitigation framework presented in the Final Supplemental EIS will apply to the authorized segments. The Modification Act (Sec. (c)(1)) requires the BLM to issue the ROW (that portion in the NCA) within 90 days of the enactment of the Appropriations Act, or by August 2, 2017.

In light of the Modification Act's non-discretionary direction to issue the statutory ROW, the BLM's reconsideration of the January 19, 2017, Decision will consider the alternative(s) from the Supplemental EIS that align with the statutory ROW, so as to meet the agency's purpose and need for action, *i.e.*, to respond to the Proponents' ROW application and the direction of the Modification Act, and the no-action alternative.

Because the route pairing described as Alternative 1 (routes described as Revised Proposed 8 and Revised Proposed 9) in the Supplemental EIS is the only alternative that meets these criteria, it will be analyzed as the action alternative for reconsideration.

Furthermore, because the statutory ROW directed the BLM to issue a ROW grant for certain portions of the routes within the NCA boundaries previously analyzed in Alternative 1 in the Supplemental EIS, the EA and

subsequent decision will address only public lands identified with Alternative 1 which lie outside the NCA boundaries that existed when the Final Supplemental EIS was published (October 7, 2016, 81 FR 69845). In the EA, the BLM plans to rely on the Supplemental EIS and the 2013 Final EIS for both the ROW alternatives for Segments 8 and 9 and the corresponding land use plan amendments necessary to support the alternative.

Because the potential selection of a different ROW alternative would require a new decision for corresponding land use plan amendments, the BLM must ensure that it is satisfying the land use plan amendment requirements set forth in 43 CFR part 1600. The BLM is preparing an EA to inform reconsideration of the January 19, 2017, Decision and meet the regulatory requirements for amending land use plans, including public participation opportunities, and to ensure that any new information regarding the alternatives presented in the Supplemental EIS and 2013 Final EIS are analyzed. This Notice announces the beginning of scoping to seek public input on issues and planning criteria.

The purpose of public scoping is to determine relevant issues that will influence the scope of the EA. The BLM invites public participation and comment on those issues, potential impacts, and mitigation measures associated with granting ROWs on public lands for Segments 8 and 9 that may not have been addressed in the Final Supplemental EIS.

The BLM identified and analyzed the following issues and concerns in the Final Supplemental EIS for Segments 8 and 9 of the Project:

- Effects to the objects and values for which the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) was designated;
- Land use conflicts and inconsistency with land use plans;
- Effects of the project on local and regional socioeconomic conditions;
- Effects on wildlife habitat, plants, and animals, including threatened, endangered, and sensitive species;
- Effects to visual resources and existing view-sheds;
- Effects to historic and cultural resources;
- Effects to Indian trust assets;
- Opportunities to apply mitigation strategies for on-site, regional, and compensatory mitigation; and
- Siting on private lands versus public lands.

Planning criteria considered for the plan amendments associated with each

action alternative in the Supplemental EIS include the following:

- NEPA;
- Existing laws, regulations, and BLM policies;
- Plans, programs and policies of other Federal, State, and local governments, and Indian tribes;
- Public input;
- Future needs and demands for existing or potential resource commodities and values;
- Past and present use of public and adjacent lands;
- Environmental impacts;
- Social and economic values;
- Public welfare and safety; and
- National energy policies and plans.

#### Land Use Plan Amendments

The Supplemental EIS identified 17 amendments to BLM land use plans needed to authorize Alternative 1. The January 2017 Decision approved two amendments to the Twin Falls MFP and one amendment to the Snake River Birds of Prey RMP that would also be necessary to authorize Alternative 1. The January Decision set aside and, remand notwithstanding, these approved plan amendments remain in effect. In addition, the Modification Act superseded the need for seven plan amendments to the Snake River Birds of Prey RMP associated with Alternative 1 analyzed in the Supplemental EIS. As a result, selecting Alternative 1 in a Decision on reconsideration would require seven plan amendments to three current BLM land use plans, as follows:

- Kuna MFP;
- Bennett Hills/Timmerman Hills MFP; and
- Jarbidge RMP (1987, for areas not covered by the 2015 Jarbidge RMP).

In order to authorize Segment 8 in Alternative 1, the Kuna MFP would need an amendment to allow the transmission line outside of existing corridors. An amendment to the Bennett Hills/Timmerman Hills MFP would be needed to allow the route near archeological sites and to change Visual Resource Management (VRM) classes. The 1987 Jarbidge RMP would need amendments to change VRM Classes, allow crossing of the Oregon National Historic Trail, and change a utility avoidance/restricted area designation.

In order to authorize Segment 9 in this alternative, the 1987 Jarbidge RMP would need an amendment to change VRM Class II to VRM Class III for areas still managed under that plan.

The route pairing identified in the Supplemental EIS as Alternative 5 (Route 8G and Route 9K) was selected in the January Decision. The January 19, 2017, ROD approved one amendment to

the Bruneau MFP, two amendments to the Twin Falls MFP, and one amendment to the Snake River Birds of Prey RMP needed to grant a ROW for Alternative 5. These plan amendments remain in effect. The alignment pairing in this alternative does not connect with the ROW the BLM plans to issue pursuant to the Modification Act.

#### Mitigation

The Final Supplemental EIS presents a framework the BLM has developed in cooperation with the Proponents for assessing compensatory mitigation under FLPMA and for implementing NEPA regulations on mitigating project-related impacts to National Historic Trails; cultural resources; wetlands; and resources, objects, and values in the NCA. The framework discusses avoidance, minimization, and compensation measures that would be required under each alternative analyzed in the Supplemental EIS. The Modification Act directs implementation of this framework during construction of each respective project segment (Sec. 2(c)(A)). Impacts to Greater sage-grouse and migratory birds are addressed in the 2013 Final EIS for the entire, 10-segment project and in the corresponding 2013 ROD. The Supplemental EIS develops further mitigation measures for indirect effects to Greater sage-grouse.

You may submit comments in writing to the BLM using one of the methods listed in the **ADDRESSES** section above, according to the time frame named in the **DATES** section above. We will provide additional opportunities for public participation as appropriate.

During the Supplemental EIS process, the BLM coordinated through the NEPA scoping process and comment period to help fulfill the public involvement requirements under the National Historic Preservation Act (54 U.S.C. 306108) as provided in 36 CFR 800.2(d)(3). Any additional information about historic and cultural resources within the area potentially affected by the proposed action, but not available during preparation of the Supplemental EIS, will assist the BLM in identifying and evaluating impacts to such resources during preparation of the EA.

During preparation of the Supplemental EIS, the BLM consulted with Indian tribes on a Government-to-Government basis in accordance with Executive Order 13175 and other policies, and will continue such consultations during preparation of the EA. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, will be given due consideration. Federal, State,

and local agencies, along with Tribes and other stakeholders who may be interested in or affected by the proposed action that the BLM is evaluating, are invited to participate in the scoping process and, if eligible, may request or be requested by the BLM to participate in the development of the EA as a Cooperating Agency.

The BLM will provide a public comment period for the Draft RMP Amendment(s)/EA. The BLM will continue to work collaboratively with interested parties to identify the amendments and selected route that are best suited to local, regional, and national needs and concerns.

The BLM used an interdisciplinary approach to select an alternative from the Supplemental EIS to respond to the ROW application, and will continue this approach in reconsidering the January 19, 2017, Decision.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

**Authority:** 40 CFR 1501.7 and 43 CFR 1610.2.

**Timothy M. Murphy,**  
*BLM Idaho State Director.*

[FR Doc. 2017-18181 Filed 8-25-17; 8:45 am]

**BILLING CODE 4310-GG-P**

## DEPARTMENT OF THE INTERIOR

### National Park Service

[NPS-WASO-NAGPRA-NPS0023877;  
PPWOCRADNO-PCU00RP14.R50000]

#### Notice of Intent to Repatriate Cultural Items: Brooklyn Museum, Brooklyn, NY

**AGENCY:** National Park Service, Interior.  
**ACTION:** Notice.

**SUMMARY:** The Brooklyn Museum, in consultation with the appropriate Indian Tribe, has determined that the cultural item listed in this notice meets the definition of sacred object and object of cultural patrimony. Lineal descendants or representatives of any Indian Tribe not identified in this notice that wish to claim this cultural item should submit a written request to the Brooklyn Museum. If no additional claimants come forward, transfer of

control of the cultural item to the Indian Tribe stated in this notice may proceed.

**DATES:** Lineal descendants or representatives of any Indian Tribe not identified in this notice that wish to claim this cultural item should submit a written request with information in support of the claim to the Brooklyn Museum at the address in this notice by September 27, 2017.

**ADDRESSES:** Nancy Rosoff, Andrew W. Mellon Senior Curator, Arts of the Americas, Brooklyn Museum, 200 Eastern Parkway, Brooklyn, NY 11238, telephone (718) 501-6283, [nancy.rosoff@brooklynmuseum.org](mailto:nancy.rosoff@brooklynmuseum.org).

**SUPPLEMENTARY INFORMATION:** Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3005, of the intent to repatriate a cultural item under the control of the Brooklyn Museum, Brooklyn, NY, that meets the definition of sacred object and object of cultural patrimony under 25 U.S.C. 3001.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3). The determinations in this notice are the sole responsibility of the museum that has control of the Native American cultural item. The National Park Service is not responsible for the determinations in this notice.

#### History and Description of the Cultural Item

On August 7, 1905, Stewart Culin, the Brooklyn Museum's Curator of Ethnology (1903-1929) purchased a woman's dance skirt from Brouse Brizard in Arcata, Humboldt County, CA. Culin purchased the skirt at Brizard's home, not in his Arcata store. Following Culin's purchase of the skirt, it was brought to the Brooklyn Museum where it was accessioned as Hupa and given the accession number 06.331.7923. This woman's dance skirt has been identified as Wiyot and as a sacred object and object of cultural patrimony.

Museum records and information provided during consultation with Wiyot representatives indicate that the skirt is culturally affiliated with the Wiyot Tribe of northwestern California. The skirt is identified as Wiyot based upon its physical appearance and construction. It is made of deer hide and adorned with abalone shell, clam shell, copper, bear grass, maidenhair fern, iris fibers, and glass beads. While most abalone shell is a dull grey or white on the outside, the cut shell pieces on the Brooklyn Museum skirt are red, which means that they are from red abalone, an

identification that relates to the Wiyot story of Abalone Woman, whose drops of blood created the red-shelled abalone. The story explains why red abalone is only found along the shores of Wiyot territory, and therefore is used in the making of Wiyot regalia.

Tribal representatives also identified the skirt as a ceremonial garment worn by Wiyot women during the Brush Dance, which is held during the annual World Renewal Ceremony in winter or early spring. As such, it is considered sacred, and an inalienable ceremonial object, which was obtained without the consent of an appropriate Wiyot authority. The Wiyot maintain that Brouse Brizard was not the rightful owner of the garment because Wiyot law prohibits the sale of ceremonial items.

The circumstances in which sacred and ceremonial objects were separated from the Wiyot people can be explained by their history. In 1860, Wiyot life in their traditional homeland was violently interrupted by the nighttime massacre of as many as 250 women, children and elders, probably by gold prospectors. The massacre resulted in survivors fleeing Wiyot territory and ultimately seeking protection among their Hupa and Yurok neighbors. During a lengthy period when the Wiyot were refugees, ceremonial life was curtailed. In 1981, the Wiyot Tribe received federal recognition and, in 1991, they were moved to the Table Bluff Reservation. Slowly they have been buying back lands that were originally part of their traditional territory. Today the Wiyot Tribe has approximately 650 enrolled members. It has a language revitalization program, and an active repatriation program to bring cultural heritage objects back home. In 2014, after the industrial contamination of their sacred site on Indian Island was cleaned up, the Wiyot held their first World Renewal Ceremonial in over 150 years.

#### Determinations Made by the Brooklyn Museum

Officials of the Brooklyn Museum have determined that:

- Pursuant to 25 U.S.C. 3001(3)(C), the one cultural item described above is a specific ceremonial object needed by traditional Native American religious leaders for the practice of traditional Native American religions by their present-day adherents.

- Pursuant to 25 U.S.C. 3001(3)(D), the one cultural item described above has ongoing historical, traditional, or cultural importance central to the Native American group or culture itself, rather than property owned by an individual.

• Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the sacred object and object of cultural patrimony and the Wiyot Tribe, California (previously listed as the Table Bluff Reservation—Wiyot Tribe).

#### Additional Requestors and Disposition

Lineal descendants or representatives of any Indian Tribe not identified in this notice that wish to claim this cultural item should submit a written request with information in support of the claim to Nancy Rosoff, Andrew W. Mellon Senior Curator, Arts of the Americas, Brooklyn Museum, 200 Eastern Parkway, Brooklyn, NY 11238, telephone (718) 501-6283, [nancy.rosoff@brooklynmuseum.org](mailto:nancy.rosoff@brooklynmuseum.org), by September 27, 2017. After that date, if no additional claimants have come forward, transfer of control of the sacred object and object of cultural patrimony to the Wiyot Tribe, California (previously listed as the Table Bluff Reservation—Wiyot Tribe) may proceed.

The Brooklyn Museum is responsible for notifying the Wiyot Tribe, California (previously listed as the Table Bluff Reservation—Wiyot Tribe) that this notice has been published.

Dated: July 26, 2017.

**Melanie O'Brien,**

*Manager, National NAGPRA Program.*

[FR Doc. 2017-18188 Filed 8-25-17; 8:45 am]

**BILLING CODE 4312-52-P**

## DEPARTMENT OF THE INTERIOR

### National Park Service

[NPS-WASO-NAGPRA-23693;  
PPWOCRADNO-PCU00RP14.R50000]

#### Notice of Intent To Repatriate Cultural Items: Denver Museum of Nature & Science, Denver, CO

**AGENCY:** National Park Service, Interior.

**ACTION:** Notice.

**SUMMARY:** The Denver Museum of Nature & Science, in consultation with the appropriate Indian Tribes or Native Hawaiian organizations, has determined that the cultural items listed in this notice meet the definition of sacred objects and objects of cultural patrimony. Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request to the Denver Museum of Nature & Science. If no additional claimants come forward, transfer of control of the cultural items to the lineal descendants, Indian Tribes,

or Native Hawaiian organizations stated in this notice may proceed.

**DATES:** Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to the Denver Museum of Nature & Science at the address in this notice by September 27, 2017.

**ADDRESSES:** Chip Colwell, Denver Museum of Nature & Science, 2001 Colorado Boulevard, Denver, CO 80205, telephone (303) 370-6378, email [chip.colwell@dmns.org](mailto:chip.colwell@dmns.org).

**SUPPLEMENTARY INFORMATION:** Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3005, of the intent to repatriate cultural items under the control of the Denver Museum of Nature & Science, Denver, CO, that meet the definition of sacred objects and objects of cultural patrimony under 25 U.S.C. 3001.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3). The determinations in this notice are the sole responsibility of the museum, institution, or Federal agency that has control of the Native American cultural items. The National Park Service is not responsible for the determinations in this notice.

#### History and Description of the Cultural Item(s)

Prior to 1964, 10 cultural items were removed from The Pueblo of Acoma in Cibola County, NM. The 10 sacred objects and objects of cultural patrimony include one Katsina Uuwaa'ka (AC.6501), collected by Byron Harvey III, a great grandson of Fred Harvey; one Katsina Uuwaa'ka (AC.7696), collected by the Taos Book Shop; one Katsina Uuwaa'ka (AC.4820), collected by William S. Dutton of La Posada Gift Shop; one ceremonial pot (AC.118), used to keep ceremonial paint and to collect rain water to make ceremonial medicine for curing ceremonies, collected by Erich Kohlberg of Kohlberg's Antiques and Indian Arts; two ceremonial pots (AC.2278 and AC.2279), used in kivas for ceremony, collected by Julius Gans, of Southwest Arts and Crafts in Santa Fe, NM; and four prayer sticks (AC.4809A, AC.4809C, AC.4809D, and AC.4809E), collected by William S. Dutton of La Posada Gift Shop. All of the cultural objects were purchased by Mary and Francis Crane between 1954 and 1964. The Cranes then donated nine of the

items to DMNS on May 27, 1983. The ceremonial pot (AC.118) was donated to DMNS in November of 1972.

Cultural affiliation was established through documentation, consultation, and notification procedures undertaken by Damian Garcia and Aaron Sims, and corroborated by the DMNS's accession documentation, showing cultural affiliation with the Pueblo of Acoma.

#### Determinations Made by the Denver Museum of Nature & Science

Officials of the Denver Museum of Nature & Science have determined that:

• Pursuant to 25 U.S.C. 3001(3)(C), the 10 cultural items described above are specific ceremonial objects needed by traditional Native American religious leaders for the practice of traditional Native American religions by their present-day adherents.

• Pursuant to 25 U.S.C. 3001(3)(D), the 10 cultural items described above have ongoing historical, traditional, or cultural importance central to the Native American group or culture itself, rather than property owned by an individual.

• Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the sacred objects and objects of cultural patrimony and the Pueblo of Acoma.

#### Additional Requestors and Disposition

Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to Chip Colwell, Denver Museum of Nature & Science, 2001 Colorado Boulevard, Denver, CO 80205, telephone (303) 370-6378, email [chip.colwell@dmns.org](mailto:chip.colwell@dmns.org), by September 27, 2017. After that date, if no additional claimants have come forward, transfer of control of the sacred objects and objects of cultural patrimony to the Pueblo of Acoma may proceed.

The Denver Museum of Nature & Science is responsible for notifying the Pueblo of Acoma that this notice has been published.

Dated: July 5, 2017.

**Melanie O'Brien,**

*Manager, National NAGPRA Program.*

[FR Doc. 2017-18184 Filed 8-25-17; 8:45 am]

**BILLING CODE 4312-52-P**

**DEPARTMENT OF THE INTERIOR****National Park Service**

[NPS-WASO-NAGPRA-23749;  
PPWOCRADNO-PCU00RP14.R50000]

**Notice of Intent To Repatriate Cultural Items: U.S. Department of the Interior, Bureau of Indian Affairs, Washington, DC, and Arizona State Museum, University of Arizona, Tucson, AZ**

**AGENCY:** National Park Service, Interior.

**ACTION:** Notice.

**SUMMARY:** The U.S. Department of the Interior, Bureau of Indian Affairs, and Arizona State Museum, University of Arizona, in consultation with the appropriate Indian Tribes or Native Hawaiian organizations, have determined that the cultural items listed in this notice meet the definition of unassociated funerary objects. Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request to the Bureau of Indian Affairs. If no additional claimants come forward, transfer of control of the cultural items to the lineal descendants, Indian Tribes, or Native Hawaiian organizations stated in this notice may proceed.

**DATES:** Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to the Bureau of Indian Affairs at the address in this notice by September 27, 2017.

**ADDRESSES:** Anna Pardo, NAGPRA Coordinator, Bureau of Indian Affairs, 12220 Sunrise Valley Drive, Room 6084, Reston, VA 20191, telephone (703) 390-6343, email [anna.pardo@bia.gov](mailto:anna.pardo@bia.gov).

**SUPPLEMENTARY INFORMATION:** Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3005, of the intent to repatriate cultural items under the control of the U.S. Department of the Interior, Bureau of Indian Affairs, Washington, DC, and in the physical custody of the Arizona State Museum, University of Arizona, Tucson, AZ (ASM) that meet the definition of unassociated funerary objects under 25 U.S.C. 3001.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3). The determinations in this notice are the sole responsibility of

the museum, institution, or Federal agency that has control of the Native American cultural items. The National Park Service is not responsible for the determinations in this notice.

**History and Description of the Cultural Items**

In the years 1963 through 1977, 2,542 cultural items were removed from the Grasshopper Pueblo site AZ P:14:1(ASM), in Navajo County, AZ. The items were removed during legally authorized excavations conducted by the University of Arizona Archeological Field School. Archeological collections from the site were brought to the museum at the end of each field season. The 2,542 unassociated funerary objects are 179 animal bones, 6 bone awls, 1 botanical specimen, 13 ceramic bowls, 12 ceramic jars, 1,677 ceramic sherds, 19 ceramic vessels, 16 ceramic vessel fragments, 8 chipped stone cores, 502 chipped stone flakes, 3 flotation samples, 2 hammerstones, 2 hand stones, 24 lots of mineral, 1 mosaicked shell, 4 polishing stones, 5 pollen samples, 5 shell beads, 14 shell bracelets, 3 shell pendants, 1 shell tinkler, 2 snail shells, 5 soil samples, 4 stone artifacts, 1 stone blade, 3 stone knives, 2 stone pendants, 9 stone projectile points, 1 stone projectile point fragment, 1 stone scraper, 1 tree ring sample, 9 worked bone artifacts, 1 worked ceramic sherd, 1 worked shell, 3 worked stones, and 2 worked stone flakes.

Site AZ P:14:1(ASM) is a large village site containing approximately 500 rooms in more than a dozen stone room blocks arranged around three main plazas. The site has been dated from A.D. 1275–1400, based on tree ring dates, architectural forms, building technology, and ceramic styles. These characteristics, the mortuary pattern, and other items of material culture are consistent with the archeologically-described Upland Mogollon or prehistoric Western Pueblo tradition.

In 1932, 2 cultural items were removed from the Canyon Creek Ruin, AZ C:2:8(GP)/V:2:1(ASM), in Gila County, AZ during legally authorized excavations conducted by the Gila Pueblo Foundation, under the direction of Emil Haury. In 1950, the Gila Pueblo Foundation closed and the collections were transferred to the Arizona State Museum. The 2 unassociated funerary objects are 2 lots of organic material.

Site AZ C:2:8(GP)/AZV:2:1(ASM) is a cliff dwelling site of approximately 140 rooms. Based on the ceramic and perishable artifact assemblage, the site is dated to A.D. 1300 to 1400. The ceramic and architectural forms are consistent

with the archeologically described Upland Mogollon or prehistoric Western Pueblo traditions.

A detailed discussion of the basis for cultural affiliation of archeological sites in the region where the above sites are located may be found in "Cultural Affiliation Assessment of White Mountain Apache Tribal Lands (Fort Apache Indian Reservation)," by John R. Welch and T.J. Ferguson (2005). To summarize, archeologists have used the terms Upland Mogollon or prehistoric Western Pueblo to define the archeological complex represented by the sites described above. Material culture characteristics of these traditions include a temporal progression from earlier pit houses to later masonry pueblos, villages organized in room blocks of contiguous dwellings associated with plazas, rectangular kivas, polished and paint-decorated ceramics, unpainted corrugated ceramics, inhumation burials, cradleboard cranial deformation, grooved stone axes, and bone artifacts. The combination of the material culture attributes and a subsistence pattern that included hunting and gathering augmented by maize agriculture helps to identify an earlier group. Archeologists have also remarked that there are strong similarities between this earlier group and present-day Tribes included in the Western Pueblo ethnographic group, especially the Hopi Tribe of Arizona and the Zuni Tribe of the Zuni Reservation, New Mexico. The similarities in ceramic traditions, burial practices, architectural forms, and settlement patterns have led archeologists to believe that the prehistoric inhabitants of the Mogollon Rim region migrated north and west to the Hopi mesas, and north and east to the Zuni River Valley. Certain objects found in Upland Mogollon archeological sites have been found to have strong resemblances with ritual paraphernalia that are used in continuing religious practices by the Hopi and Zuni. Some petroglyphs on the Fort Apache Indian Reservation have also persuaded archeologists of continuities between the earlier identified group and current-day Western Pueblo people. Biological information from AZ P:14:1(ASM) supports the view that the prehistoric occupants of the Upland Mogollon region had migrated from various locations to the north and west of the region.

Hopi and Zuni oral traditions parallel the archeological evidence for migration. Migration figures prominently in Hopi oral tradition,

which refers to the ancient sites, pottery, stone tools, petroglyphs, and other artifacts left behind by the ancestors as "Hopi Footprints." This migration history is complex and detailed, and includes traditions relating specific clans to the Mogollon region. Hopi cultural advisors have also identified medicinal and culinary plants at archeological sites in the region. Their knowledge about these plants was passed down to them from the ancestors who inhabited these ancient sites. Migration is also an important attribute of Zuni oral tradition and includes accounts of Zuni ancestors passing through the Upland Mogollon region. The ancient villages mark the routes of these migrations. Zuni cultural advisors remark that the ancient sites were not abandoned. People returned to these places from time to time, either to reoccupy them or for religious pilgrimages—a practice that has continued to the present day. Archeologists have found ceramic evidence at shrines in the Upland Mogollon region that confirms these reports. Zuni cultural advisors have names for plants endemic to the Mogollon region that do not grow on the Zuni Reservation. They also have knowledge about traditional medicinal and ceremonial uses for these resources, which has been passed down to them from their ancestors. Furthermore, Hopi and Zuni cultural advisors have recognized that their ancestors may have been co-resident at some of the sites in this region during their ancestral migrations.

There are differing points of view regarding the possible presence of Apache people in the Upland Mogollon region during the time that these sites were occupied. Some Apache traditions describe interactions with Ancestral Pueblo people during this time, but according to these stories, Puebloan people and Apache people were regarded as having separate identities. The White Mountain Apache Tribe of the Fort Apache Reservation, Arizona, does not claim cultural affiliation with the human remains and associated funerary objects from this site. As reported by Welch and Ferguson (2005), consultations between the White Mountain Apache Tribe of the Fort Apache Reservation, Arizona, and the Navajo Nation, Arizona, New Mexico & Utah; Pueblo of Acoma, New Mexico; and Pueblo of Laguna, New Mexico, have indicated that that none of these Tribes wish to pursue claims of affiliation with sites on White Mountain Apache Tribal lands. Finally, the White Mountain Apache Tribe of the Fort

Apache Reservation, Arizona, supports the repatriation of human remains and associated funerary objects from these sites and is ready to assist the Hopi Tribe of Arizona and Zuni Tribe of the Zuni Reservation, New Mexico, in their reburial.

**Determinations Made by the U.S. Department of the Interior, Bureau of Indian Affairs, and the Arizona State Museum, University of Arizona**

Officials of the Bureau of Indian Affairs and Arizona State Museum have determined that:

- Pursuant to 25 U.S.C. 3001(3)(B), the 2,544 cultural items described above are reasonably believed to have been placed with or near individual human remains at the time of death or later as part of the death rite or ceremony and are believed, by a preponderance of the evidence, to have been removed from a specific burial site of a Native American individual.

- Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the unassociated funerary objects and the Hopi Tribe of Arizona and Zuni Tribe of the Zuni Reservation, New Mexico.

**Additional Requestors and Disposition**

Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to Anna Pardo, NAGPRA Coordinator, Bureau of Indian Affairs, Reston, 12220 Sunrise Valley Drive, VA 20191, telephone (703) 390-6343, email [anna.pardo@bia.gov](mailto:anna.pardo@bia.gov), by September 27, 2017. After that date, if no additional claimants have come forward, transfer of control of the unassociated funerary objects to the Hopi Tribe of Arizona and Zuni Tribe of the Zuni Reservation, New Mexico may proceed.

The Arizona State Museum is responsible for notifying the Hopi Tribe of Arizona; White Mountain Apache Tribe of the Fort Apache Reservation, Arizona; and Zuni Tribe of the Zuni Reservation, New Mexico, that this notice has been published.

Dated: July 11, 2017.

**Melanie O'Brien,**

*Manager, National NAGPRA Program.*

[FR Doc. 2017-18186 Filed 8-25-17; 8:45 am]

**BILLING CODE 4312-52-P**

**DEPARTMENT OF THE INTERIOR**

**National Park Service**

[NPS-WASO-NAGPRA-23695; PPWOCRADN0-PCU00RP14.R50000]

**Notice of Intent To Repatriate Cultural Items: The Fort Worth Museum of Science and History, Fort Worth, TX**

**AGENCY:** National Park Service, Interior.

**ACTION:** Notice.

**SUMMARY:** The Fort Worth Museum of Science and History, in consultation with the appropriate Indian Tribes or Native Hawaiian organizations, has determined that the cultural items listed in this notice meet the definition of objects of cultural patrimony. Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request to The Fort Worth Museum of Science and History. If no additional claimants come forward, transfer of control of the cultural items to the lineal descendants, Indian Tribes, or Native Hawaiian organizations stated in this notice may proceed.

**DATES:** Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to The Fort Worth Museum of Science and History at the address in this notice by September 27, 2017.

**ADDRESSES:** Chanin Voss Scanlon, The Fort Worth Museum of Science and History, 1600 Gendy Street, Fort Worth, TX 76107, telephone (817) 255-9300, email [cscanlon@fwmslh.org](mailto:cscanlon@fwmslh.org).

**SUPPLEMENTARY INFORMATION:** Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3005, of the intent to repatriate cultural items under the control of The Fort Worth Museum of Science and History that meet the definition of objects of cultural patrimony under 25 U.S.C. 3001.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3). The determinations in this notice are the sole responsibility of the museum, institution, or Federal agency that has control of the Native American cultural items. The National Park Service is not responsible for the determinations in this notice.

**History and Description of the Cultural Item**

On February 15, 1978, The Fort Worth Museum of Science and History acquired one yucca, stair-step basket, object identification number 31N.00139, from Lew Meekins. No other provenance information is available.

Museum accession and catalog records, as well as consultations with a representative of the Santa Rosa Rancheria Tachi Tribe, in Lemoore, CA, indicated that the basket is of Yokut design, and would have been utilized during the Tribe's Traditional Coming of Age Ceremonies. The representative of the Santa Rosa Rancheria Tachi Tribe also provided supporting ethnographic documentation for the cultural significance of the object.

**Determinations Made by The Fort Worth Museum of Science and History**

Officials of The Fort Worth Museum of Science and History have determined that:

- Pursuant to 25 U.S.C. 3001(3)(D), the 1 cultural item described above has ongoing historical, traditional, or cultural importance central to the Native American group or culture itself, rather than property owned by an individual.

- Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the object of cultural patrimony and the Santa Rosa Indian Community of the Santa Rosa Rancheria, California.

**Additional Requestors and Disposition**

Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to Chanin Voss Scanlon, The Fort Worth Museum of Science and History, 1600 Gendy Street, Fort Worth, TX 76107, telephone (817) 255-9300, email [cscanlon@fwmsch.org](mailto:cscanlon@fwmsch.org), by September 27, 2017. After that date, if no additional claimants have come forward, transfer of control of the object of cultural patrimony to the Santa Rosa Indian Community of the Santa Rosa Rancheria, California, may proceed.

The Fort Worth Museum of Science and History is responsible for notifying the Santa Rosa Indian Community of the Santa Rosa Rancheria, California, that this notice has been published.

Dated: July 3, 2017.

**Melanie O'Brien,**

*Manager, National NAGPRA Program.*

[FR Doc. 2017-18185 Filed 8-25-17; 8:45 am]

**BILLING CODE 4312-52-P**

**DEPARTMENT OF THE INTERIOR****National Park Service**

**[NPS-WASO-NAGPRA-23751;  
PPWOCRADNO-PCU00RP14.R50000]**

**Notice of Intent To Repatriate Cultural Items: Tennessee Valley Authority, Knoxville, TN**

**AGENCY:** National Park Service, Interior.

**ACTION:** Notice.

**SUMMARY:** The Tennessee Valley Authority (TVA), in consultation with the appropriate Indian Tribes or Native Hawaiian organizations, has determined that the cultural items listed in this notice meet the definition of unassociated funerary objects. Further, TVA has determined that a cultural affiliation between the unassociated funerary objects and present-day federally recognized Indian Tribes can be reasonably traced. Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request to TVA. If no additional claimants come forward, transfer of control of the cultural items to the lineal descendants, Indian Tribes, or Native Hawaiian organizations stated in this notice may proceed.

**DATES:** Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to TVA at the address in this notice by September 27, 2017.

**ADDRESSES:** Dr. Thomas O. Maher, TVA, 400 West Summit Hill Drive, WT11D, Knoxville, TN 37902-1401, telephone (865) 632-7458, email [tomaher@tva.gov](mailto:tomaher@tva.gov).

**SUPPLEMENTARY INFORMATION:** Notice is here given in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3005, of the intent to repatriate cultural items under the control of the Tennessee Valley Authority, Knoxville, TN, which meet the definition of unassociated funerary objects under 25 U.S.C. 3001.

This notice is published as part of the National Park Service's administrative responsibilities under NAGPRA, 25 U.S.C. 3003(d)(3). The determinations in this notice are the sole responsibility of the museum, institution, or Federal agency that has control of the Native American cultural items. The National Park Service is not responsible for the determinations in this notice.

**History and Description of the Cultural Items**

On September 28, 1938, two cultural items were removed from the Laws site (1MS100) on Pine Island in Marshall County, AL, after TVA acquired the land on April 21, 1937. There appear to have been at least four occupations at site 1MS100: A pre-ceramic period with steatite vessels; a village period with limestone-tempered pottery during the Flint River phase (A.D. 500-1000); a late Mississippian occupation with shell-tempered ceramics and rectilinear wall trench structures (Crow Creek phase, A.D. 1500-1700); and burials with Euro-American trade goods (circa A.D. 1670-1715). The two unassociated funerary objects are one brass pendant and one brass ring.

Excavation records from site 1MS100 indicated that these two unassociated funerary objects were found in burial unit 1 with the fragmentary remains of a child. The human remains are no longer present. The brass ring found in burial unit 1 is similar to the brass rings found in burial units 17 and 40 of the same site which were also child burials. In a separate Notice of Inventory Completion, the human remains from burial units 17 and 40 have been culturally affiliated to Native American descendants of the Koasati/Kaskinampo. These descendants include the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas); Alabama-Quassarte Tribal Town; Coushatta Tribe of Louisiana; and The Muscogee (Creek) Nation.

On November 29, 1937, two unassociated funerary objects were excavated from burial unit 6 at site 1MS121 on Pine Island in Marshall County, AL, after TVA purchased the land on April 19, 1937. There were excavations in both the village and adjacent mound. There are no radiocarbon dates for this site. Artifacts recovered from the site indicate both a Woodland and Mississippian occupation. The two unassociated funerary objects are one Barton Incised jar and one Bell Plain carinated bowl. Both ceramic vessels are from the Mississippian period.

Excavation documents indicate that burial unit 6 did contain human remains, with these funerary objects placed near the head of the individual. These human remains are no longer present. The unassociated funerary objects are similar to those found in burial units 2, 4, and 5 of the same site. In a separate Notice of Inventory Completion, the human remains from burial units 2, 4, and 5 have been

culturally affiliated to Native American descendants of the Koasati/Kaskinampo. These descendants include the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas); Alabama-Quassarte Tribal Town; Coushatta Tribe of Louisiana; and The Muscogee (Creek) Nation.

Chronicles from Spanish explorers of the 16th century and French explorers of the 17th and 18th century indicate the presence of chiefdom level tribal entities in the southeastern United States which resemble the Mississippian chiefdoms. Linguistic analysis of place names noted by multiple Spanish explorers indicates that Koasati speaking groups inhabited northeastern Alabama. Early maps and research into the historic Native American occupation of northeastern Alabama indicates that the Koasati (as called by the English) or the Kaskinampo (as called by the French) were found at multiple sites in Jackson and Marshall Counties in the 17th and 18th centuries. Oral history, traditions, and expert opinions of the descendants of Koasati/Kaskinampo indicate that this portion of the Tennessee River valley was a homeland of the Koasati/Kaskinampo people. The subsequent involuntary diaspora of these peoples resulted in descendants of the Koasati/Kaskinampo among multiple federally recognized Indian Tribes.

#### Determinations Made by the Tennessee Valley Authority

Officials of the Tennessee Valley Authority have determined that:

- Pursuant to 25 U.S.C. 3001(3)(B), the four cultural items described above are reasonably believed to have been placed with or near individual human remains at the time of death or later as part of the death rite or ceremony and are believed, by a preponderance of the evidence, to have been removed from specific burial sites of Native American individuals.

- Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the unassociated funerary objects and the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas); Alabama-Quassarte Tribal Town; Coushatta Tribe of Louisiana; and The Muscogee (Creek) Nation.

#### Additional Requestors and Disposition

Lineal descendants or representatives of any Indian Tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with

information in support of the claim to Dr. Thomas O. Maher, TVA, 400 West Summit Hill Drive, WT11D, Knoxville, TN 37902-1401, telephone (865) 632-7458, email [tomaher@tva.gov](mailto:tomaher@tva.gov), by September 27, 2017. After that date, if no additional claimants have come forward, transfer of control of the unassociated funerary objects to the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas); Alabama-Quassarte Tribal Town; Coushatta Tribe of Louisiana; and The Muscogee (Creek) Nation may proceed.

The TVA is responsible for notifying the Absentee Shawnee Tribe of Indians of Oklahoma; Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas); Cherokee Nation; Coushatta Tribe of Louisiana; Eastern Band of Cherokee Indians; Mississippi Band of Choctaw Indians; Poarch Band of Creeks (previously listed as the Poarch Band of Creek Indians of Alabama); The Chickasaw Nation; The Choctaw Nation of Oklahoma; The Muscogee (Creek) Nation; The Seminole Nation of Oklahoma; and United Keetoowah Band of Cherokee Indians in Oklahoma that this notice has been published.

Dated: July 11, 2017.

**Melanie O'Brien,**

*Manager, National NAGPRA Program.*

[FR Doc. 2017-18187 Filed 8-25-17; 8:45 am]

BILLING CODE 4312-52-P

#### INTERNATIONAL TRADE COMMISSION

[Investigation No. 337-TA-1039]

#### Certain Electronic Devices, Including Mobile Phones, Tablet Computers, and Components Thereof; Notice of a Commission Determination Not To Review an Initial Determination Granting a Joint Motion To Terminate the Investigation Based on a Settlement Agreement; Termination of the Investigation

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission has determined not to review an initial determination (“ID”) (Order No. 30) of the presiding administrative law judge (“ALJ”) granting a joint motion to terminate the above-captioned investigation in its entirety based on a Settlement Agreement and Related Agreements.

#### FOR FURTHER INFORMATION CONTACT:

Cathy Chen, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 205-2392. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission’s electronic docket (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** The Commission instituted this investigation on January 27, 2017, based on a complaint filed on behalf of Nokia Technologies Oy (“Nokia”) of Espoo, Finland. 82 FR 8626 (Jan. 27, 2017). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, by reason of infringement of certain claims of U.S. Patent Nos. 7,415,247; 9,270,301; 6,393,260; and 6,826,391. The complaint further alleges that a domestic industry exists. The Commission’s notice of investigation named as respondent Apple Inc., a/k/a Apple Computer, Inc. (“Apple”) of Cupertino, California. The Office of Unfair Import Investigations (“OUII”) is also participating in the investigation. This investigation was severed from Inv. No. 337-TA-1038. See Inv. No. 337-TA-1038, Order No. 1 (Jan. 26, 2017).

On June 9, 2017, Nokia and Apple filed a joint motion to terminate the investigation based on a Settlement Agreement and Related Agreements. OUII filed a response indicating that it does not oppose the motion once Nokia and Apple file a revised public version of the motion and accompanying agreements. On June 21, 2017, the ALJ ordered the parties to file a revised public version of all of the agreements. See Order No. 26 (June 21, 2017). That same day, the ALJ issued Order No. 27, granting the motion and certifying the confidential version of the agreements to the Commission. Nokia and Apple jointly submitted revised public versions of the agreements on June 30, 2017, and July 7, 2017. On July 19, 2017, the Commission determined to

review Order No. 27, because the revised public versions of the agreements did not comply with Commission Rules 210.21(b) and 201.6. The Commission remanded the investigation to the ALJ to require the parties to file an updated public version of the agreements.

On August 1, 2017, Nokia and Apple filed an updated public version of the agreements. On August 4, 2017, the ALJ issued the subject ID (Order No. 30) granting the parties' June 9, 2017 motion to terminate and certified the confidential and public versions of the agreements to the Commission. On August 14, 2017, the ALJ issued a public version of the subject ID.

No petitions for review were filed. The Commission has determined not to review the ID.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, and in part 210 of the Commission's Rules of Practice and Procedure, 19 CFR part 210.

By order of the Commission.

Issued: August 23, 2017.

**William R. Bishop,**

*Supervisory Hearings and Information Officer.*

[FR Doc. 2017-18140 Filed 8-25-17; 8:45 am]

**BILLING CODE 7020-02-P**

## DEPARTMENT OF JUSTICE

### Antitrust Division

#### Notice Pursuant to the National Cooperative Research and Production Act of 1993—Cooperative Research Group on Hedge IV

Notice is hereby given that, on July 25, 2017, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* ("the Act"), Southwest Research Institute—Cooperative Research Group on HEDGE IV ("HEDGE IV") has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, The G.I.E. Regienov, Boulogne Billancourt, FRANCE, has been added as a party to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research

project remains open, and HEDGE IV intends to file additional written notifications disclosing all changes in membership.

On February 14, 2017, HEDGE IV filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on March 27, 2017 (82 FR 15238).

The last notification was filed with the Department on June 9, 2017. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on July 20, 2017 (82 FR 33516).

**Patricia A. Brink,**

*Director of Civil Enforcement, Antitrust Division.*

[FR Doc. 2017-18173 Filed 8-25-17; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF JUSTICE

### Antitrust Division

#### Notice Pursuant to the National Cooperative Research and Production Act of 1993—ODVA, INC.

Notice is hereby given that, on July 27, 2017, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* ("the Act"), ODVA, Inc. ("ODVA") has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, Atop Technologies Inc., Hsinchu, TAIWAN; Dynatronix, Inc., Amery, WI; PMV Automation AB, Solna, SWEDEN; Buerkert Werke GmbH & Co. KG, Ingelfingen, GERMANY; KEBA AG, Linz, AUSTRIA; U.I. Lapp GmbH, Stuttgart, GERMANY; MAC Valves, Inc., Wixom, MI; Lika Electronic Srl, Carrè (VI), ITALY; and Power Electronics International, Inc., East Dundee, IL, have been added as parties to this venture.

Also, Lapp USA, Inc., Florham Park, NJ; Innovasic, Inc., Albuquerque, NM; and Beacon Global Technology, ChengDu, PEOPLE'S REPUBLIC OF CHINA, have withdrawn as parties to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and ODVA intends to file additional written

notifications disclosing all changes in membership.

On June 21, 1995, ODVA filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on February 15, 1996 (61 FR 6039).

The last notification was filed with the Department on April 20, 2017. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on May 22, 2017 (82 FR 23297).

**Patricia A. Brink,**

*Director of Civil Enforcement, Antitrust Division.*

[FR Doc. 2017-18176 Filed 8-25-17; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF JUSTICE

### Antitrust Division

#### Notice Pursuant to the National Cooperative Research and Production Act of 1993—OpenDaylight Project, Inc.

Notice is hereby given that, on July 26, 2017, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* ("the Act"), OpenDaylight Project, Inc. ("OpenDaylight") has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, Hewlett Packard, Palo Alto, CA; A10 Networks, San Jose, CA; KEMP Technologies, New York, NY; Microsoft Corporation, Redmond, WA; ClearPath Networks, El Segundo, CA; Versa Networks, Santa Clara, CA; Alcatel-Lucent Enterprise, Calabasas, CA; and SDN Essentials, Sunnyvale, CA, have withdrawn as parties to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and OpenDaylight intends to file additional written notifications disclosing all changes in membership.

On May 23, 2013, OpenDaylight filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on July 1, 2013 (78 FR 39326).

The last notification was filed with the Department on May 2, 2017. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on June 7, 2017 (82 FR 26514).

**Patricia A. Brink,**

*Director of Civil Enforcement, Antitrust Division.*

[FR Doc. 2017-18179 Filed 8-25-17; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF JUSTICE

### Antitrust Division

#### Notice Pursuant to the National Cooperative Research and Production Act of 1993—Telemanagement Forum

Notice is hereby given that, on July 21, 2017, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* (“the Act”), TeleManagement Forum (“The Forum”) filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act’s provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, Carphone Warehouse Ltd., London, UNITED KINGDOM; Crowd Frame Consulting Limited, Dublin, IRELAND; APIVERSITY, Madrid, SPAIN; UNITEL ONE SOURCE LIMITED, London, UNITED KINGDOM; Metaswitch Networks, Enfield, UNITED KINGDOM; ArtOfArc, Dortmund, GERMANY; Vecta Strategy, Dubai, UNITED ARAB EMIRATES; Telecommunications Services of Trinidad and Tobago Limited, Port of Spain, TRINIDAD AND TOBAGO; Wytec International, Inc., San Antonio, TX; Go plc, Marsa, MALTA; Orange Moldova, Chisinau, MOLDOVA; Dimension Data, Johannesburg, SOUTH AFRICA; GDi GISDATA LLC, Zagreb, CROATIA; Peritus j.d.o.o., Varazdin, CROATIA; Inomial Pty Ltd., Melbourne, AUSTRALIA; Simpledata Group S.A., Santiago, CHILE; KBZ Gateway Company Limited, Yangon, MYANMAR; CallVU, Tel Aviv, ISRAEL; Beyond Verbal, Tel Aviv, ISRAEL; Brytlyt Limited, Maidstone, UNITED KINGDOM; Smartpipe Solutions, London, UNITED KINGDOM; MindShift Ltd., Bangalore, INDIA; APInf, Tampere, FINLAND; New York University, New York, NY; Future Cities Catapult, London, UNITED KINGDOM; Spark New Zealand Limited, Auckland, NEW ZEALAND; Philips Electronics Nederland B.V., Eindhoven,

NETHERLANDS; Sarpal Consultancy, Chigwell, UNITED KINGDOM; Agile Fractal Grid, Inc., Medway, MA; Neural Technologies, Petersfield, UNITED KINGDOM; Suomen Erillisverkot Oy, Espoo, FINLAND; CenturyLink, Inc., Monroe, LA; Windstream Communications, Little Rock, AR; Civity, Zeist, NETHERLANDS; de Brenni Executive Consulting Services, Adelaide, AUSTRALIA; KPMG Australia, Sydney, AUSTRALIA; Tata Communications Ltd., Mumbai, INDIA; TEAM COTE D’AZUR, Nice, FRANCE; Inabox Group Limited, Sydney, AUSTRALIA; PT Telekomunikasi Selular, Jakarta, INDONESIA; Cognito Analytics, Toledo, OH; Claro Paraguay, Asuncion, PARAGUAY; Telcel Mexico, Ciudad de Mexico, MEXICO; Claro Uruguay, Montevideo, URUGUAY; Telekom Slovenije, Ljubljana, SLOVENIA; Claro Puerto Rico, Guaynabo, PUERTO RICO; Claro Argentina, Buenos Aires, ARGENTINA; IMmobile Ltd., London, UNITED KINGDOM; Hansen Technologies Denmark A/S, Sonderborg, DENMARK; Dark Fibre Africa, Gauteng, SOUTH AFRICA; Six DEE Telecom Solutions Pvt Ltd., Bangalore, INDIA; SFR, Paris, FRANCE; ForgeRock Inc., San Francisco, CA; America Movil, Ciudad De Mexico Distrito Federal, MEXICO; HITSS Consulting SA de CV, Tijuana, MEXICO; China Academy of Information and Communications Technology (CAICT), Beijing, PEOPLE’S REPUBLIC OF CHINA; THE GC INDEX LTD., London, UNITED KINGDOM; Metasite Data Insights, Vilnius, LITHUANIA; Bulb Technologies, Ltd., Zagreb, CROATIA; SKY BRASIL, São Paulo, BRAZIL; and Millicom Cable El Salvador, S.A. de C.V., Luxembourg, LUXEMBOURG, have been added as a parties to this venture.

Also, the following members have changed their names: ARGELA Technologies to ARGELA Yazilim ve Bilisim Teknolojileri Sanayi ve Ticaret A.S., Istanbul, TURKEY; Elitecore Technologies Limited to Sterlite Technologies Limited, Ahmedabad, INDIA; Mobinil—The Egyptian Company for Mobile Services to Orange Egypt, Cairo, EGYPT; and SMI Technologies to Quob Park Estate, Wickham, UNITED KINGDOM.

In addition, the following parties have withdrawn as parties to this venture: AFNS, LLC, Rock Round, TX; Aktavara AB, Stockholm, SWEDEN; Anritsu A/S, Copenhagen, DENMARK; ASPIDER Solutions US Inc, Salem, MA; Axino Solutions Group, Aachen, GERMANY; Azerfon, Baku, AZERBAIJAN; AZR L.L.C., Tripoli, LIBYA; Bispro Consulting, Jakarta, INDONESIA; Boeing

Company, Seattle, WA; Brighthouse Networks, East Syracuse, NY; Canoe Ventures, Englewood, CO; Cisco Systems, San Jose, CA; ClickSoftware, Inc., Burlington, MA; Cloud Strategy Partners LLC, Scotts Valley, CA; Coeos Assurances, Paris, FRANCE; Converge ICT Solutions Inc., Pasig City, PHILIPPINES; Coraltree Systems Ltd., Fareham, UNITED KINGDOM; Core Information Consult, Jegenstorf, SWITZERLAND; Creating Waves AS, Kongsberg, NORWAY; Cubika S.A., Buenos Aires, ARGENTINA; Defence Science and Technology Laboratory, Salisbury, UNITED KINGDOM; Dorado Software, Folsom, CA; EASIS CONSULTING, Paris, FRANCE; Ebistrategy Software (Shanghai) Co., LTD., Shanghai, PEOPLE’S REPUBLIC OF CHINA; Efiniti Services, Macquarie Park, AUSTRALIA; Eurofiber Nederland BV, Maarssen Utrecht, NETHERLANDS; 28Focus Data Services Ltd., Oxfordshire, UNITED KINGDOM; Frontier Communications, Rochester, NY; GFI INFORMATIQUE, Saint-Ouen, FRANCE; Guangzhou Highjet Technology Co., Ltd., Guangzhou, PEOPLE’S REPUBLIC OF CHINA; HeyStaks, Dublin, IRELAND; Hydro-Quebec, Montreal, CANADA; IAB bvba—ICT Architecture, Leuven, BELGIUM; Ibis Instruments, Belgrade, SERBIA; IEON Consulting Ltd., London, UNITED KINGDOM; Innovave Technologies, Lisbon, PORTUGAL; Intense Technologies Limited, Secunderabad, INDIA; IoT connctd GmbH, Berlin, GERMANY; IRIS Network Systems, Cape Town, SOUTH AFRICA; IT Services Hungary LTD., Budapest, HUNGARY; Lebara Services Ltd., London, UNITED KINGDOM; Lotus Innovations, LLC, Irvine, CA; Manx ICT Association (MICTA), Douglas, UNITED KINGDOM; Massy Group, Port of Spain, TRINIDAD AND TOBAGO; MATRIX Software, Mountain View, CA; MayerConsult, Inc., Ottawa, CANADA; MD Healthcare Consultants Ltd., Salford, UNITED KINGDOM; Mediacom Communications Corp., Middletown, NY; MedPal Health Solutions, Tel Aviv, ISRAEL; MFEC PLC., Bangkok, THAILAND; Michi Creative City Designers Inc., Chiyodaku, JAPAN; MicroSigns, Inc., Montreal, CANADA; Moogsoft Inc., San Francisco, CA; Net Servicios, Chacara Santo Antonio, BRAZIL; Netxccl Systems Pte Ltd., Toa Payoh, SINGAPORE; nTels Co. Ltd., Seoul, KOREA; Oger Telecom Management Services Company Ltd., Istanbul, TURKEY; OMANTEL, Muscat, OMAN; OpenVault, Golden, CO; Peter Ghys—individual contributor, Brighton, AUSTRALIA; Philippe Imoucha, Aix En

Provence, FRANCE; Premavals, Noisy-le-Grand, FRANCE; Pryv, Lausanne, SWITZERLAND; Rede Nacional de Ensino e Pesquisa, Rio de Janeiro, BRAZIL; Rettungsdienst-Kooperation in Schleswig-Holstein (RKISH) GmbH, Heide, GERMANY; Revenue Protect Limited, Hatfield, UNITED KINGDOM; RoboFold Ltd., London, UNITED KINGDOM; Smart Assistant, Vienna, AUSTRIA; TechNexus, LLC, Potomac, MD; The KPI Guy, Arvada, CO; Tilgin IPRG AB, Kista, SWEDEN; Trilogy-International Partners, LLC., Bellevue, WA; T-Systems International Services GmbH, Frankfurt am Main, GERMANY; Ufone, Islamabad, PAKISTAN; UK Broadband Ltd., London, UNITED KINGDOM; Vasona Networks, Inc., San Jose, CA; Vodafone Netherlands, Maastricht, NETHERLANDS; West Avenue Capital Markets Partners, Darien, CT; ZAA Architects, Montréal, CANADA; Ziggo, Utrecht, NETHERLANDS; ING Bank N.V., Amsterdam, NETHERLANDS; Mascom Wireless (MTN Botswana), Gabarone, BOTSWANA; and PricewaterhouseCoopers LLP—Edmonton, Alberta, CANADA.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and The Forum intends to file additional written notifications disclosing all changes in membership.

On October 21, 1988, The Forum filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on December 8, 1988 (53 FR 49615).

The last notification was filed with the Department on January 23, 2017. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on February 27, 2017 (82 FR 11943).

**Patricia A. Brink,**

*Director of Civil Enforcement, Antitrust Division.*

[FR Doc. 2017-18175 Filed 8-25-17; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF LABOR

### Employment and Training Administration

#### Agency Information Collection Activities; Comment Request; Application for Permanent Employment Certification, Extension With Nonsubstantive Changes of Currently Approved Collection

**ACTION:** Notice.

**SUMMARY:** The Department of Labor (DOL), Employment and Training Administration (ETA), is soliciting comments concerning a proposed extension for the authority to conduct the information collection request (ICR) titled “Application for Permanent Employment Certification.” This comment request is part of continuing Departmental efforts to reduce paperwork and respondent burden in accordance with the Paperwork Reduction Act of 1995 (PRA).

**DATES:** Consideration will be given to all written comments received by October 27, 2017.

**ADDRESSES:** A copy of this ICR with applicable supporting documentation, including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained free of charge by contacting William W. Thompson II, Administrator, Office of Foreign Labor Certification, telephone number: 202-513-7350 (this is not a toll-free number). Individuals with hearing or speech impairments may access the telephone number above via TTY by calling the toll-free Federal Information Relay Service at 1-877-889-5627 (TTY/TDD). Fax: 202-513-7395 or by email at [ETA.OFLC.Forms@dol.gov](mailto:ETA.OFLC.Forms@dol.gov) subject line: ETA-9089.

Submit written comments about, or requests for a copy of, this ICR by mail or courier to the U.S. Department of Labor, Employment and Training Administration, Office of Foreign Labor Certification, Box #12-200, 200 Constitution Avenue NW., Washington, DC 20210; by email: [ETA.OFLC.Forms@dol.gov](mailto:ETA.OFLC.Forms@dol.gov) subject line: ETA-9089; or by Fax: 202-513-7395.

**SUPPLEMENTARY INFORMATION:** The DOL, as part of continuing efforts to reduce paperwork and respondent burden, conducts a pre-clearance consultation program to provide the general public and Federal agencies an opportunity to comment on proposed and/or continuing collections of information before submitting them to the OMB for final approval. This program helps to ensure requested data can be provided

in the desired format, reporting burden (time and financial resources) is minimized, collection instruments are clearly understood, and the impact of collection requirements can be properly assessed.

Section 212(a)(5)(A) of the Immigration and Nationality Act (INA), 8 U.S.C. 1182(a)(5)(A), requires the Secretary of Labor to certify that any alien seeking to enter the United States for the purpose of performing skilled or unskilled labor will not adversely affect the wages and working conditions of U.S. workers similarly employed, and that there are not sufficient U.S. workers able, willing, and qualified to perform such labor. DOL uses Form ETA-9089 to collect information about a sponsoring employer’s job offer, and about a foreign national’s education and work history, necessary to determine whether the admission of that foreign national meets the requirements for certification under Section 212(a)(5)(A). Employers seeking to sponsor workers as shepherders or in Schedule A occupations file Form ETA-9089 directly with the Department of Homeland Security (DHS). DHS also accepts the ETA-9089 in place of the ETA-750 in its National Interest Waiver program.

This information collection is authorized by INA Sections 212(a)(5)(A), 203(b)(2), and 203(b)(3).

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information that does not display a valid Control Number. See 5 CFR 1320.5(a) and 1320.6.

Interested parties are encouraged to provide comments to the contact shown in the **ADDRESSES** section. Comments must be written to receive consideration, and they will be summarized and included in the request for OMB approval of the final ICR. In order to help ensure appropriate consideration, comments should mention ETA, OMB Control No. 1205-0451.

Submitted comments will also be a matter of public record for this ICR and posted on the Internet without redaction. The DOL encourages commenters not to include personally identifiable information, confidential business data, or other sensitive

statements/information in any comments.

The DOL is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Agency: DOL-ETA.

Type of Review: Extension with nonsubstantive changes.

Title of Collection: Application for Permanent Employment Certification. Form: Form ETA-9089.

OMB Control Number: 1205-0451.

Affected Public: Individuals or households; businesses or other for-profit entities; not-for-profit institutions; farms; and Federal, state, local or tribal governments.

Estimated Number of Respondents: 113,304.

Frequency: On occasion.

Total Estimated Annual Responses: 113,304.

Estimated Average Time per Response: 2 hours.

Estimated Total Annual Burden Hours: 227,118 hours.

Total Estimated Annual Other Cost Burden: \$18,769,032.

Authority: 44 U.S.C. 3506(c)(2)(A).

Byron Zuidema,

Deputy Assistant Secretary for Employment and Training, Labor.

[FR Doc. 2017-18135 Filed 8-25-17; 8:45 am]

BILLING CODE 4510-FP-P

**NUCLEAR REGULATORY COMMISSION**

[NRC-2017-0001]

**Sunshine Act Meeting Notice**

**DATES:** Weeks of August 28, September 4, 11, 18, 25, October 2, 2017.

**PLACE:** Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

**STATUS:** Public and Closed.

**Week of August 28, 2017**

There are no meetings scheduled for the week of August 28, 2017.

**Week of September 4, 2017—Tentative**

Wednesday, September 6, 2017

1:30 p.m. NRC All Employees Meeting (Public Meeting), Marriott Bethesda North Hotel, 5701 Marinelli Road, Rockville, MD 20852

Thursday, September 7, 2017

10:00 a.m. Briefing on NRC International Activities (Closed—Ex. 1 & 9)

**Week of September 11, 2017—Tentative**

There are no meetings scheduled for the week of September 11, 2017.

**Week of September 18, 2017—Tentative**

There are no meetings scheduled for the week of September 18, 2017.

**Week of September 25, 2017—Tentative**

There are no meetings scheduled for the week of September 25, 2017.

**Week of October 2, 2017—Tentative**

Thursday, October 5, 2017

9:00 a.m. Hearing on Combined Licenses for Turkey Point, Units 6 and 7: Section 189a. of the Atomic Energy Act Proceeding (Public Meeting) (Contact: Manny Comar: 301-415-3863)

This meeting will be webcast live at the Web address—<http://www.nrc.gov/>.

\* \* \* \* \*

The schedule for Commission meetings is subject to change on short notice. For more information or to verify the status of meetings, contact Denise McGovern at 301-415-0681 or via email at [Denise.McGovern@nrc.gov](mailto:Denise.McGovern@nrc.gov).

\* \* \* \* \*

The NRC Commission Meeting Schedule can be found on the Internet at: <http://www.nrc.gov/public-involve/public-meetings/schedule.html>.

\* \* \* \* \*

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings, or need this meeting notice or the transcript or other information from the public meetings in another format (e.g., braille, large print), please notify Kimberly Meyer, NRC Disability Program Manager, at 301-287-0739, by videophone at 240-428-3217, or by

email at [Kimberly.Meyer-Chambers@nrc.gov](mailto:Kimberly.Meyer-Chambers@nrc.gov). Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

\* \* \* \* \*

Members of the public may request to receive this information electronically. If you would like to be added to the distribution, please contact the Nuclear Regulatory Commission, Office of the Secretary, Washington, DC 20555 (301-415-1969), or email [Brenda.Akstulewicz@nrc.gov](mailto:Brenda.Akstulewicz@nrc.gov) or [Patricia.Jimenez@nrc.gov](mailto:Patricia.Jimenez@nrc.gov).

Dated: August 24, 2017.

**Denise L. McGovern,**

Policy Coordinator, Office of the Secretary.

[FR Doc. 2017-18273 Filed 8-24-17; 4:15 pm]

BILLING CODE 7590-01-P

**NUCLEAR REGULATORY COMMISSION**

[NRC-2017-0067]

**Information Collection: Licensing Requirements for Land Disposal of Radioactive Waste**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of submission to the Office of Management and Budget; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) has recently submitted a request for renewal of an existing collection of information to the Office of Management and Budget (OMB) for review. The information collection is entitled, "Licensing Requirements for Land Disposal of Radioactive Waste."

**DATES:** Submit comments by September 27, 2017.

**ADDRESSES:** Submit comments directly to the OMB reviewer at: Aaron Szabo, Desk Officer, Office of Information and Regulatory Affairs (3150-0135), NEOB-10202, Office of Management and Budget, Washington, DC 20503; telephone: 202-395-3621, email: [oira\\_submission@omb.eop.gov](mailto:oira_submission@omb.eop.gov).

**FOR FURTHER INFORMATION CONTACT:** David Cullison, NRC Clearance Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2084; email: [INFOCOLLECTS.Resource@nrc.gov](mailto:INFOCOLLECTS.Resource@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Obtaining Information and Submitting Comments**

**A. Obtaining Information**

Please refer to Docket ID NRC-2017-0067 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 Web site*: Go to <http://www.regulations.gov> and search for Docket ID NRC-2017-0067.

- *NRC's Agencywide Documents Access and Management System (ADAMS)*: You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Documents" and then 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](mailto:pdr.resource@nrc.gov). The supporting statement is available in ADAMS under Accession No. ML17191B158.

- *NRC's PDR*: You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

- *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](mailto:INFOCOLLECTS.Resource@NRC.GOV).

#### B. Submitting Comments

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 posts all comment submissions at <http://www.regulations.gov> as well as entering 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 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 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 submissions into ADAMS.

## II. Background

Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the NRC recently submitted a request for renewal of an existing collection of information to OMB for review entitled, "Licensing Requirements for Land Disposal of Radioactive Waste." The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

The NRC published a **Federal Register** notice with a 60-day comment period on this information collection on May 10, 2017 (82 FR 21834).

1. *The title of the information collection*: 10 CFR part 61—Licensing Requirements for Land Disposal of Radioactive Waste.
2. *OMB approval number*: 3150-0135.
3. *Type of submission*: Extension.
4. *The form number if applicable*: Not applicable.

5. *How often the collection is required or requested*: Applications for licenses are submitted annually and as other events require.

6. *Who will be required or asked to respond*: Applicants for and holders of an NRC license (to include Agreement State licensees) for land disposal of low-level radioactive waste.

7. *The estimated number of annual responses*: 16 (12 reporting responses + 4 recordkeepers).

8. *The estimated number of annual respondents*: 4.

9. *An estimate of the total number of hours needed annually to comply with the information collection requirement or request*: 5,372 hours (56 hours reporting + 5,316 hours recordkeeping).

10. *Abstract*: Part 61 of title 10 of the *Code of Federal Regulations* (10 CFR), establishes the procedures, criteria, and license terms and conditions for the land disposal of low-level radioactive waste. The reporting and recordkeeping requirements are mandatory and, in the case of application submittals, are required to obtain a benefit. The information collected in the applications, reports, and records is evaluated by the NRC to ensure that the licensee's or applicant's disposal facility, equipment, organization, training, experience, procedures, and plans provide an adequate level of protection of public health and safety, common defense and security, and the environment.

Dated at Rockville, Maryland, this 22nd day of August, 2017.

For the Nuclear Regulatory Commission.

**David Cullison,**

*NRC Clearance Officer, Office of the Chief Information Officer.*

[FR Doc. 2017-18141 Filed 8-25-17; 8:45 am]

**BILLING CODE 7590-01-P**

## NUCLEAR REGULATORY COMMISSION

[NRC-2017-0166]

### Information Collection: NRC Form 483, Registration Certificate—*In Vitro* Testing with Byproduct Material Under General License

**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, "NRC Form 483, Registration Certificate—*In Vitro* Testing with Byproduct Material Under General License." NRC Form 483 will be revised to update instructions and regulatory language.

**DATES:** Submit comments by October 27, 2017. 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:

- *Federal Rulemaking Web site*: Go to <http://www.regulations.gov> and search for Docket ID NRC-2017-0166. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; email: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@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-5 F53, 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](mailto:INFOCOLLECTS.Resource@NRC.GOV).

#### SUPPLEMENTARY INFORMATION:

### I. Obtaining Information and Submitting Comments

#### A. Obtaining Information

Please refer to Docket ID NRC–2017–0166 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 Web site:* Go to <http://www.regulations.gov> and search for Docket ID NRC–2017–0166. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2017–0166 on this Web site.

- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Documents" and then 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](mailto:pdr.resource@nrc.gov). A copy of the collection of information and related instructions may be obtained without charge by accessing ADAMS under Accession No. ML17128A454. The supporting statement is available in ADAMS under Accession No. ML17128A131.

- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

- *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](mailto:INFOCOLLECTS.Resource@NRC.GOV).

#### B. Submitting Comments

Please include Docket ID NRC–2017–0166 in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

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 posts all comment submissions at <http://www.regulations.gov> as well as entering 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 submissions 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:* NRC Form 483, Registration Certificate—*In Vitro* Testing With Byproduct Material Under General License.
2. *OMB approval number:* 3150–0038.
3. *Type of submission:* Revision.
4. *The form number, if applicable:* NRC Form 483.

5. *How often the collection is required or requested:* There is a one-time submittal of information to receive a validated copy of NRC Form 483 with an assigned registration number. In addition, any changes in the information reported on NRC Form 483 must be reported in writing to the NRC within 30 days after the effective date of the change.

6. *Who will be required or asked to respond:* Any physician, veterinarian in the practice of veterinary medicine, clinical laboratory or hospital which desires a general license to receive, acquire, possess, transfer, or use specified units of byproduct material in certain *in vitro* clinical or laboratory tests.

7. *The estimated number of annual responses:* 6.

8. *The estimated number of annual respondents:* 6.

9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 1.10 hours.

10. *Abstract:* Section 31.11 of title 10 of the *Code of Federal Regulations* (10 CFR), established a general license

authorizing any physician, clinical laboratory, veterinarian in the practice of veterinary medicine, or hospital to possess certain small quantities of byproduct material for *in vitro* clinical or laboratory test not involving the internal or external administration of the byproduct material or the radiation therefrom to human beings or animals. Possession of byproduct material under 10 CFR 31.11 is not authorized until the physician, clinical laboratory, veterinarian in the practice of veterinary medicine, or hospital has filed NRC Form 483 and received from the Commission a validated copy of NRC Form 483 with a registration number. The licensee can use the validated copy of NRC Form 483 to obtain byproduct material from a specifically licensed supplier. The NRC incorporates this information into a database which is used to verify that a general licensee is authorized to receive the byproduct material.

### 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 at Rockville, Maryland, this 23rd day of August, 2017.

For the Nuclear Regulatory Commission.

**David Cullison,**

*NRC Clearance Officer, Office of the Chief Information Officer.*

[FR Doc. 2017–18147 Filed 8–25–17; 8:45 am]

**BILLING CODE 7590–01–P**

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## PENSION BENEFIT GUARANTY CORPORATION

### Agency Information Collection Activities: Submission of Information Collection for OMB Review; Comment Request; Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery

**AGENCY:** Pension Benefit Guaranty Corporation.

**ACTION:** Notice of request for extension of OMB approval.

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**SUMMARY:** This collection of information was developed as part of a Federal Government-wide effort to streamline the process for seeking feedback from the public on service delivery. Pension Benefit Guaranty Corporation (“PBGC”) is requesting that the Office of Management and Budget (OMB) extend approval under the Paperwork Reduction Act of this collection of information on qualitative feedback on PBGC’s service delivery (OMB Control Number 1212–0066; expires August 31, 2017). This notice informs the public of PBGC’s request and solicits public comment on the collection of information.

**DATES:** Comments must be submitted by September 27, 2017.

**ADDRESSES:** Comments should be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for Pension Benefit Guaranty Corporation, via electronic mail at [OIRA\\_DOCKET@omb.eop.gov](mailto:OIRA_DOCKET@omb.eop.gov) or by fax to (202) 395–6974.

A copy of the request (including the collection of information) will be posted at <http://www.pbgc.gov/res/laws-andregulations/information-collectionsunder-omb-review.html>. It may also be obtained without charge by writing to the Disclosure Division of the Office of the General Counsel of PBGC at the above address, faxing a request to 202–326–4042, or calling 202–326–4040 during normal business hours. TTY and TDD users may call the Federal relay service toll-free at 1 800–877–8339 and ask to be connected to 202–326–4040. The Disclosure Division will email, fax, or mail the request to you, as you request.

**FOR FURTHER INFORMATION CONTACT:** Jo Amato Burns ([burns.jo.amato@pbgc.gov](mailto:burns.jo.amato@pbgc.gov)), Regulatory Affairs Division, Office of the General Counsel, Pension Benefit Guaranty Corporation, 1200 K Street NW., Washington, DC 20005–4026, 202 326–4400, extension 3072, or Deborah Chase Murphy ([murphy.deborah@pbgc.gov](mailto:murphy.deborah@pbgc.gov)), Assistant General Counsel, same address and phone number, extension 3451. TTY and TDD users may call the Federal relay service toll-free at 800–877–8339 and ask to be connected to 202–326–4400.

**SUPPLEMENTARY INFORMATION:**

*Title:* Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery

*Abstract:* The information collection activity will gather qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the

Administration’s commitment to improving service delivery. By qualitative feedback PBGC means information that provides useful insights on perceptions and opinions, but the information requests are not statistical surveys that yield quantitative results generalizable to the population of interest. Collections with such objectives require more rigorous designs that address: The target population to which generalizations will be made, the sampling frame, the sample design (including stratification and clustering), the precision requirements or power calculations that justify the proposed sample size, the expected response rate, methods for assessing potential non-response bias, the protocols for data collection, and any testing procedures that were or will be undertaken prior to fielding the study.

The feedback from this information collection will provide insights into customer or stakeholder perceptions, experiences and expectations, provide an early warning of issues with service, or focus attention on areas where communication, training or changes in operations might improve delivery of products or services. These collections will allow for ongoing, collaborative and actionable communications between PBGC and its customers and stakeholders. These collections also allow feedback to contribute directly to the improvement of program management.

The collection of information has been approved by OMB under control number 1212–0066 through August 31, 2017. PBGC is requesting that OMB extend approval of the information collection for another three years without change. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

On June 21, 2017 (82 FR 28363), PBGC published a notice informing the public that it intended to request OMB approval and soliciting public comment. No comments were received.

Annually, over the next three years, PBGC estimates that it will conduct three activities involving about 1,630 respondents, each of whom will provide one response. The number of respondents will vary by activity: 40 for usability testing, 90 for focus groups (nine groups of ten respondents), and 1,500 for customer satisfaction surveys. PBGC estimates the annual burden of this collection of information as 635 hours: 2 hours per response for usability testing (total 80 hours); 2 hours per response for focus groups (total 180 hours); and 15 minutes per response for

customer satisfaction surveys (total 375 hours).

Issued in Washington DC by  
**Deborah Chase Murphy,**  
*Assistant General Counsel for Regulatory Affairs, Pension Benefit Guaranty Corporation.*

[FR Doc. 2017–18207 Filed 8–25–17; 8:45 am]

**BILLING CODE 7709–02–P**

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## 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 notice required under 39 U.S.C. 3642(d)(1):* August 28, 2017.

**FOR FURTHER INFORMATION CONTACT:** Elizabeth A. Reed, 202–268–3179.

**SUPPLEMENTARY INFORMATION:** The United States Postal Service® hereby gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on August 22, 2017, it filed with the Postal Regulatory Commission a *Request of the United States Postal Service to Add Priority Mail Contract 343 to Competitive Product List*. Documents are available at [www.prc.gov](http://www.prc.gov), Docket Nos. MC2017–178, CP2017–279.

**Elizabeth A. Reed,**  
*Attorney, Corporate and Postal Business Law.*

[FR Doc. 2017–18128 Filed 8–25–17; 8:45 am]

**BILLING CODE 7710–12–P**

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## 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 notice required under 39 U.S.C. 3642(d)(1):* August 28, 2017.

**FOR FURTHER INFORMATION CONTACT:** Elizabeth A. Reed, 202–268–3179.

**SUPPLEMENTARY INFORMATION:** The United States Postal Service® hereby

gives notice that, pursuant to 39 U.S.C. 3642 and 3632(b)(3), on August 22, 2017, it filed with the Postal Regulatory Commission a *Request of the United States Postal Service to Add Priority Mail Contract 344 to Competitive Product List*. Documents are available at [www.prc.gov](http://www.prc.gov), Docket Nos. MC2017–179, CP2017–280.

Elizabeth A. Reed,

Attorney, Corporate and Postal Business Law.

[FR Doc. 2017–18129 Filed 8–25–17; 8:45 am]

BILLING CODE 7710–12–P

## SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–81457; File No. SR–BatsEDGX–2017–34]

### Self-Regulatory Organizations; Bats EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Rules 11.6, Definitions, 11.8, Order Types, and 11.10, Order Execution

August 22, 2017.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b–4 thereunder,<sup>2</sup> notice is hereby given that on August 11, 2017, Bats EDGX Exchange, Inc. (the “Exchange” or “EDGX”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange has designated this proposal as a “non-controversial” proposed rule change pursuant to Section 19(b)(3)(A) of the Act<sup>3</sup> and Rule 19b–4(f)(6)(iii) thereunder,<sup>4</sup> which renders it effective upon filing with the Commission. 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 filed a proposal to: (i) Add new optional functionality to orders that include the Minimum Execution Quantity instruction by amending paragraph (h) of Exchange Rule 11.6, Definitions; (ii) amend paragraph (b)(3) of Exchange Rule 11.8 to specify that a Minimum Execution Quantity instruction may be included on a Limit Order with a TIF of IOC; and (iii) amend paragraph (e)(3) of Exchange

Rule 11.10, Order Execution, to specify that a change to the minimum quantity of an order with a Minimum Execution Quantity instruction may be included in a Replace message. The proposed amendments are substantially similar to the rules of the Nasdaq Stock Market LLC (“Nasdaq”) and the Investors Exchange LLC (“IEX”).<sup>5</sup>

The text of the proposed rule change is available at the Exchange’s Web site at [www.bats.com](http://www.bats.com), at the principal office of the Exchange, and at the Commission’s Public Reference Room.

#### II. Self-Regulatory Organization’s Statement of the Purpose of, and 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 parts 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: (i) Add new optional functionality to orders that include the Minimum Execution Quantity instruction by amending paragraph (h) of Exchange Rule 11.6, Definitions; (ii) amend paragraph (b)(3) of Exchange Rule 11.8 to specify that a Minimum Execution Quantity instruction may be included on a Limit Order with a TIF of IOC; and (iii) amend paragraph (e)(3) of Exchange Rule 11.10, Order Execution, to specify that a change to the minimum quantity of an order with a Minimum Execution Quantity instruction may be included in a Replace message. These proposed amendments are substantially similar to the rules of Nasdaq and IEX.<sup>6</sup>

<sup>5</sup> See Nasdaq Rule 4703(e) (defining Minimum Quantity). See also Securities Exchange Act Release No. 73959 (December 30, 2014), 80 FR 582 (January 6, 2015) (order approving new optional functionality for Minimum Quantity Orders). See IEX Rule 11.190(b)(11) and Supplementary Material .03 (defining Minimum Quantity Orders and MinExec with Cancel Remaining and MinExec with AON Remaining). See also Securities Exchange Act Release No. 78101 (June 17, 2016), 81 FR 41141 (June 23, 2016) (order approving the IEX exchange application, which included IEX’s Minimum Quantity Orders). See also IEX Rule 11.190(d)(3) (allowing the minimum quantity size of an order to be changed via a replace message).

<sup>6</sup> See *id.*

Exchange Rule 11.6(h), Proposed Individual Minimum Size

The Exchange proposes to add new optional functionality that would enhance the utility of the Minimum Execution Quantity instruction by amending paragraph (h) of Exchange Rule 11.6, Definitions. In sum, the proposal would permit an incoming order with a Minimum Execution Quantity to forego executions where multiple resting orders could otherwise be aggregated to satisfy the order’s minimum quantity.

A Minimum Execution Quantity enables a User<sup>7</sup> to specify a minimum share amount at which the order will execute. An order with a Minimum Execution Quantity will not execute unless the volume of contra-side liquidity available to execute against the order meets or exceeds the designated minimum. Specifically, Minimum Execution Quantity is an instruction a User may attach to an order with a Non-Displayed<sup>8</sup> instruction or a TIF of IOC<sup>9</sup> requiring the System<sup>10</sup> to execute the order only to the extent that a minimum quantity can be satisfied by execution against a single order or multiple aggregated orders simultaneously.<sup>11</sup> Today, an order with a Minimum Execution Quantity will execute upon entry against a single order or multiple orders if the sum of those orders is equal to or greater than its minimum quantity. An order with a Minimum Execution Quantity instruction may be partially executed upon entry so long as the execution size is equal to or exceeds the minimum quantity provided in the instruction. Any shares remaining after a partial execution will continue to be executed at a size that is equal to or exceeds the quantity provided in the instruction. Where the number of shares

<sup>7</sup> The term “User” is defined as “any Member or Sponsored Participant who is authorized to obtain access to the System pursuant to Rule 11.3.” See Exchange Rule 1.5(ee).

<sup>8</sup> The term “Non-Displayed” is defined as “[a]n instruction the User may attach to an order stating that the order is not to be displayed by the System on the EDGX Book.” See Exchange Rule 11.6(e)(2).

<sup>9</sup> As discussed below, the Exchange also proposes to clarify within Rule 11.6(h) that a Minimum Quantity instruction may also be added to an order with a TIF of IOC. See *e.g.*, Exchange Rules 11.8(a)(3) and (c)(2) (specifying that the Minimum Quantity instruction may be included on Market Orders and ISOs with a TIF of IOC).

<sup>10</sup> The term “System” is defined as “the electronic communications and trading facility designated by the Board through which securities orders of Users are consolidated for ranking, execution and, when applicable, routing away.” See Exchange Rule 1.5(cc).

<sup>11</sup> Today, the System will aggregate multiple resting orders to satisfy the incoming order’s minimum quantity and a User cannot elect the incoming order to execute against a single resting contra-side order.

<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b–4.

<sup>3</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>4</sup> 17 CFR 240.19b–4(f)(6)(iii).

remaining after a partial execution are less than the quantity provided in the instruction, the Minimum Execution Quantity shall be equal to the number of shares remaining. The Minimum Execution Quantity instruction may be coupled with Market Orders with a TIF of IOC,<sup>12</sup> Limit Orders with a Non-Displayed instruction<sup>13</sup> or TIF of IOC (as discussed below), Intermarket Sweep Orders (“ISO”) with a TIF of IOC,<sup>14</sup> MidPoint Peg Orders,<sup>15</sup> and Supplemental Peg Orders.<sup>16</sup>

The Exchange has observed that some market participants avoid sending large orders with a Minimum Execution Quantity instruction to the Exchange out of concern that such orders may interact with small orders entered by professional traders, possibly adversely impacting the execution of their larger order. Institutional orders are often much larger in size than the average order in the marketplace. To facilitate the liquidation or acquisition of a large position, market participants tend to submit multiple orders into the market that may only represent a fraction of the overall institutional position to be executed. Various strategies used by institutional market participants to execute large orders are intended to limit price movement of the security at issue. Executing in small sizes, even if in the aggregate it meets the order’s minimum quantity, may impact the market for that security such that the additional orders the market participant has yet to enter into the market may be more costly to execute. If an institution is able to execute in larger sizes, the contra-party to the execution is less likely to be a participant that reacts to short term changes in the stock price, and as such, the price impact to the stock may be less acute when larger individual executions are obtained.<sup>17</sup> As a result, these orders are often executed away from the Exchange in dark pools or other exchanges that offer the same functionality as proposed herein,<sup>18</sup> or via broker-dealer internalization.

To attract larger orders with a Minimum Execution Quantity, the Exchange proposes to add new optional functionality that would enhance the utility of the Minimum Execution Quantity instruction. In sum, the proposal would permit a User to elect that its incoming order with a Minimum Execution Quantity execute solely against one or more resting individual orders, each of which must satisfy the order’s minimum quantity condition. In such case, the order would forego executions where multiple resting orders could otherwise be aggregated to satisfy the order’s minimum quantity, but do not individually satisfy the minimum quantity condition.<sup>19</sup> As discussed above, under the current rule an order with a Minimum Execution Quantity will execute upon entry against any number of smaller contra-side orders that, in aggregate, meet the minimum quantity set by the User. This default behavior will remain. For example, assume there are two orders to sell resting on the EDGX Book<sup>20</sup>—the first for 300 shares and a second for 400 shares, with the 300 share order having time priority ahead of the 400 share order. If a User entered an order with a Minimum Execution Quantity to buy 1,000 shares at \$10.00 with a minimum quantity of 500 shares, and the order was marketable against the two resting sell orders for 300 and 400 shares, the System would aggregate both sell orders for purposes of meeting the minimum quantity, thus resulting in executions of 300 shares and then 400 shares respectively with the remaining 300 shares of the an order with a Minimum Execution Quantity being posted to the EDGX Book with a minimum quantity restriction of 300 shares.

The proposed new optional functionality will not allow aggregation of smaller executions to satisfy the minimum quantity of an incoming order with a Minimum Execution Quantity. Using the same scenario as above, but with the proposed new functionality and a Minimum Execution Quantity requirement of 400 shares selected by the User, the order with a Minimum Execution Quantity would not execute against the two sell orders because the 300 share order with time priority at the top of the EDGX Book is less than the incoming order’s 400 share Minimum Execution Quantity. The new functionality will cause the order with a Minimum Execution Quantity to be

cancelled or posted to the EDGX Book, Non-Displayed, in accordance with the characteristics of the underlying order type<sup>21</sup> when encountering an order with time priority that is of insufficient size to satisfy the minimum execution requirement. If posted, the order with a Minimum Execution Quantity will operate as it does currently and will only execute against individual orders that satisfy its minimum quantity as proposed herein. The Exchange notes that the User entering the order with a Minimum Execution Quantity has expressed its intention not to execute against liquidity below a certain minimum size, and therefore, cedes execution priority when it would lock an order against which it would otherwise execute if it were not for the minimum execution size restriction. The Exchange proposes to add language to paragraph (h) of Rule 11.6 to make clear that the order would cede execution priority in such in scenario.

As amended, the description of Minimum Execution Quantity under paragraph (h) of Exchange Rule 11.6 would set forth the default behavior of the Minimum Quantity instruction of executing upon entry against a single order or multiple aggregated orders simultaneously. Amended Rule 11.6(h) would set forth the proposed optional functionality where a User may alternatively specify that the incoming order’s minimum quantity condition be satisfied by each order resting on the EDGX Book that would execute against the order with the Minimum Execution Quantity instruction. If there are such orders, but there are also orders that do not satisfy the minimum quantity condition, the incoming order with the Minimum Execution Quantity instruction will execute against orders resting on the EDGX Book in accordance with Rule 11.9, Order Priority, until it reaches an order that does not satisfy the minimum quantity condition at which point it would be posted to the EDGX Book or cancelled in accordance with the terms of the order. If, upon entry, there are no orders that satisfy the minimum quantity condition resting on the EDGX Book, the order will either be posted to the EDGX Book or cancelled in accordance with the terms of the order.

The Exchange also proposes to re-price incoming orders with a Minimum Execution Quantity instruction where that order may cross an order posted on the EDGX Book. Specifically, where there is insufficient size to satisfy an

<sup>12</sup> See Exchange Rule 11.8(a)(3).

<sup>13</sup> See Exchange Rule 11.8(b)(3).

<sup>14</sup> See Exchange Rule 11.8(c)(2).

<sup>15</sup> See Exchange Rule 11.8(d)(2).

<sup>16</sup> See Exchange Rule 11.8(f)(2).

<sup>17</sup> The Commission has long recognized this concern: “[a]nother type of implicit transaction cost reflected in the price of a security is short-term price volatility caused by temporary imbalances in trading interest. For example, a significant implicit cost for large investors (who often represent the consolidated investments of many individuals) is the price impact that their large trades can have on the market. Indeed, disclosure of these large orders can reduce the likelihood of their being filled.” See Securities Exchange Act Release No. 42450 (February 23, 2000), 65 FR 10577, 10581 (February 28, 2000) (SR–NYSE–99–48).

<sup>18</sup> See *supra* note 5.

<sup>19</sup> If no election is made, the System will aggregate multiple resting orders to satisfy the incoming order’s minimum quantity.

<sup>20</sup> The term “EDGX Book” is defined as “the System’s electronic file of orders.” See Exchange Rule 1.5(d).

<sup>21</sup> See *supra* notes 11 through 16 for a description of the functionality associated with orders that may include a Minimum Execution Quantity.

incoming order's minimum quantity condition and that incoming order, if posted at its limit price, would cross an order(s) resting on the EDGX Book, the order with the minimum quantity condition will be re-priced to and ranked at the Locking Price.<sup>22</sup> For example, an order to buy at \$11.00 with a minimum quantity condition of 500 shares is entered and there is an order resting on the EDGX Book to sell 200 shares at \$10.99. The resting order to sell does not contain sufficient size to satisfy the incoming order's minimum quantity condition of 500 shares. The price of the incoming buy order, if posted to the EDGX Book, would cross the price of the resting sell order. In such case, to avoid an internally crossed book, the System will re-price the incoming buy order to \$10.99, the Locking Price. This behavior is similar to how the Exchange currently reprices Non-Displayed orders that cross the Protected Quotation of an external market.<sup>23</sup> In addition, both IEX and Nasdaq also re-price similar orders to avoid an internally crossed book.<sup>24</sup>

The rule would further be amended to account for the partial execution against an individual order in accordance with the proposed rule change. Specifically, paragraph (h) of Exchange Rule 11.6 would further be amended to state that that an order with a Minimum Execution Quantity instruction may be partially executed so long as the execution size of the individual order or aggregate size of multiple orders, as applicable, are equal to or exceed the minimum quantity provided in the instruction.

The Exchange also proposes to amend the description of the Minimum Execution Quantity instruction to clarify its operation upon order entry and when the order is posted to the EDGX Book. The Exchange proposes to clarify that upon entry, and by default, an order with a Minimum Execution Quantity will execute against a single order or multiple aggregated orders simultaneously or only against orders that individually satisfy the order's minimum quantity condition, as proposed herein. Once posted to the EDGX Book,<sup>25</sup> the order may only

execute against individual incoming orders with a size that satisfies the minimum quantity condition. The Exchange also proposed to clarify that an order that includes a Minimum Execution Quantity instruction is not eligible to be routed to another Trading Center in accordance with Exchange Rule 11.11, Routing to Away Trading Centers. These proposed changes would add additional specificity to the operation of the Minimum Execution Quantity instruction and are consistent with similar functionality offered by IEX and Nasdaq.<sup>26</sup>

#### Exchange Rule 11.8(b)(3), Limit Order Clarification

The Exchange also proposes to amend paragraph (b)(3) of Exchange Rule 11.8 to specify that a Minimum Execution Quantity instruction may be included on a Limit Order with a TIF of IOC. Currently, paragraph (b)(3) of Exchange Rule 11.8 states that Minimum Execution Quantity instruction may be placed on a Limit Order with a Non-Displayed instruction. As stated above, the Minimum Execution Quantity instruction may be coupled with, among other order types, Market Orders with a TIF of IOC and ISOs with a TIF of IOC. A Limit Order with a TIF of IOC will never be displayed or posted on the EDGX Book because, by instruction, it is to only execute upon entry, route or cancel back to the User and will never be posted to the EDGX Book.<sup>27</sup> Therefore, current functionality allows a Minimum Execution Quantity instruction to be included on a Limit Order with a TIF of IOC, as that order would not be displayed on the EDGX Book. The Exchange now seeks to add additional specificity to paragraph (b)(3) of Exchange Rule 11.6 to expressly state that a Minimum Execution Quantity instruction may be included on a Limit Order with a TIF of IOC. The Exchange notes that this is also consistent with the treatment of Minimum Quantity Orders on Bats BZX Exchange, Inc. ("BZX").<sup>28</sup>

#### Exchange Rule 11.10(e)(3), Replace Messages

The Exchange also proposes to amend paragraph (e)(3) of Rule 11.10, Order Execution, to specify that a change to the minimum quantity of an order with a Minimum Execution Quantity instruction may be included in a Replace message. The rule currently states that other than changing a Limit

Order to a Market Order, only the price, Stop Price,<sup>29</sup> the sell long indicator, Short Sale instruction,<sup>30</sup> Max Floor<sup>31</sup> and quantity terms of the order may be changed with a Replace message.<sup>32</sup> As amended, paragraph (e)(3) of Rule 11.10 would also provide for a change to the minimum quantity of an order to be included in a Replace message.<sup>33</sup> If a User desires to change any other terms of an existing order, the existing order must be cancelled and a new order must be entered. The Exchange notes that specifying within Rule 11.10(e)(3) that a change to the minimum quantity of an order may be included in a Replace message is consistent with current functionality offered by IEX.<sup>34</sup>

#### 2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act<sup>35</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act<sup>36</sup> in particular, in that it is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest.

#### Exchange Rule 11.6(h), Proposed Individual Minimum Size

The proposed rule change would remove impediments to and promote just and equitable principles of trade because it would provide Users with optional functionality that enhances the use of the Minimum Execution Quantity instruction. The proposed change to the functioning of the Minimum Execution Quantity instruction will provide market participants, including institutional firms who ultimately represent individual retail investors in

<sup>29</sup> See Exchange Rules 11.8(a)(1) and (b)(1).

<sup>30</sup> See Exchange Rule 11.6(o).

<sup>31</sup> See Exchange Rule 11.6(m)(1).

<sup>32</sup> The Exchange also proposes to amend this paragraph to specify that the Max Floor is associated with an order with a Reserve Quantity and to replace the phrase "and quantity terms" with the word "size". The Exchange believes these changes will add additional specificity to the rule and ensure the rule uses terminology consistent with the description of Replace messages and their impact on an order's priority under Exchange Rule 11.9(a)(4).

<sup>33</sup> A change to the minimum quantity of an order via a Replace message will result in such order losing time priority as compared to other orders in the EDGX Book and the time stamp for such order being revised to reflect the time of the modification.

<sup>34</sup> See IEX Rule 11.190(d)(3) (allowing a replace message to change the minimum quantity of a Minimum Quantity Order).

<sup>35</sup> 15 U.S.C. 78f(b).

<sup>36</sup> 15 U.S.C. 78f(b)(5).

<sup>22</sup> "Locking Price" is defined as "[t]he price at which an order to buy (sell), that if displayed by the System on the EDGX Book, either upon entry into the System, or upon return to the System after being routed away, would be a Locking Quotation." See Exchange Rule 11.6(f).

<sup>23</sup> See Exchange Rule 11.6(l)(3).

<sup>24</sup> See Nasdaq Rule 4703(e). See IEX Rule 11.190(h)(2).

<sup>25</sup> Orders will only post to the EDGX Book if they are designated with a TIF instruction that allows for posting. For example, an order a TIF of IOC or FOK will never post to the EDGX Book.

<sup>26</sup> See *supra* note 5.

<sup>27</sup> See Exchange Rule 11.6(q)(1).

<sup>28</sup> See BZX Rule 11.9(c)(5) (stating that BZX will only honor a specified minimum quantity on BZX Only Orders that are non-displayed or IOCs).

many cases, with better control over their orders, thereby providing them with greater potential to improve the quality of their order executions. Currently, the rule allows Users to designate a minimum acceptable quantity on an order that may aggregate multiple executions to meet the minimum quantity requirement. Once posted to the book, however, the minimum quantity requirement is equivalent to a minimum execution size requirement. The Exchange is now proposing to provide Users with control over the execution of their orders with a Minimum Execution Quantity instruction by allowing them an option to designate the minimum individual execution size upon entry. The control offered by the proposed change is consistent with the various types of control currently provided by exchange order types. For example, the Exchange and other exchanges offer limit orders, which allow a market participant control over the price it will pay or receive for a stock.<sup>37</sup> Similarly, exchanges offer order types that allow market participants to structure their trading activity in a manner that is more likely to avoid certain transaction cost related economic outcomes.<sup>38</sup>

As discussed above, the functionality proposed herein would enable Users to avoid transacting with smaller orders that they believe ultimately increases the cost of the transaction. Because the Exchange does not have this functionality, market participants, such as large institutions that transact a large number of orders on behalf of retail investors, have avoided sending large orders to the Exchange to avoid potentially more expensive transactions.<sup>39</sup> In this regard, the Exchange notes that the proposed new optional functionality may improve the Exchange's market by attracting more order flow. Such new order flow will further enhance the depth and liquidity on the Exchange, which supports just and equitable principals of trade. Furthermore, the proposed modification to the Minimum Execution Quantity instruction is consistent with providing market participants with greater control over the nature of their executions so that they may achieve their trading goals

and improve the quality of their executions.

The Exchange also believes that re-pricing incoming orders with a Minimum Execution Quantity instruction where that order may cross an order posted on the EDGX Book promotes just and equitable principles of trade because it enables the Exchange to avoid an internally crossed book. The proposed re-pricing is also similar to how the Exchange currently reprices Non-Displayed orders that cross the Protected Quotation of an external market.<sup>40</sup> In addition, both IEX and Nasdaq also re-price minimum quantity orders to avoid an internally crossed book. In certain circumstances, Nasdaq re-prices buy (sell) orders to one minimum price increment below (above) the lowest (highest) price of such orders.<sup>41</sup> IEX re-prices non-displayed orders, such as minimum quantity orders, that include a limit price more aggressive than the midpoint of the NBBO to the midpoint of the NBBO.<sup>42</sup>

Moreover, the proposed optional functionality for the Minimum Execution Quantity instruction is substantially similar to that offered by Nasdaq and IEX, both of which have been recently approved by the Commission.<sup>43</sup> Lastly, the proposed clarifications of the handing [sic] of orders with a Minimum Execution Quantity upon entry and once posted to the EDGX Book would add additional specificity to the operation of the Minimum Execution Quantity instruction and are consistent with similar functionality offered by Nasdaq.<sup>44</sup>

Clarification to Exchange Rules 11.8(b)(3) and 11.10(e)(3)

The Exchange believes the proposed amendments to paragraph (b)(3) of Rule 11.8 and paragraph (e)(3) of Rule 11.10 are also consistent with the Act in that they will add additional specificity to the rules. In particular, the proposed amendments to paragraph (b)(3) to Rule 11.8 would add additional specificity regarding the order type instructions that may be coupled with a Limit Order. The Exchange notes that this is also consistent with the treatment of

Minimum Quantity Orders on BZX,<sup>45</sup> thereby making the rule clearer and avoiding potential investor confusion. Also, the amendments to paragraph (e)(3) of Rule 11.10 will ensure the rule uses terminology consistent with the description of Replace messages and their impact on an order's priority under Exchange Rule 11.9(a)(4). Also, the Exchange notes that specifying within Rule 11.10(e)(3) that a change to the minimum quantity of an order with a Minimum Execution Quantity instruction may be included in a Replace message is consistent with current functionality offered by IEX.<sup>46</sup>

*(B) Self-Regulatory Organization's Statement on Burden on Competition*

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act, as amended. On the contrary, the Exchange believes the proposed rule change promotes competition because it will enable the Exchange to offer functionality substantially similar to that offered by Nasdaq and IEX.<sup>47</sup> In addition, the proposed amendments to paragraph (b)(3) of Rule 11.8 and paragraph (e)(3) of Rule 11.10 would not have any impact on competition as they simply add additional details to each rule and do not alter current System functionality. Therefore, the Exchange does not believe the proposed rule change will result in any burden on intermarket 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*

No comments were solicited or received on the proposed rule change.

### III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (A) Significantly affect the protection of investors or the public interest; (B) impose any significant burden on competition; and (C) by its terms, become operative for 30 days from the date on which it was filed or such shorter time as the Commission may designate it has become effective pursuant to Section 19(b)(3)(A) of the

<sup>45</sup> See BZX Rule 11.9(c)(5) (stating that BZX will only honor a specified minimum quantity on BZX Only Orders that are non-displayed or IOCs).

<sup>46</sup> See IEX Rule 11.190(d)(3).

<sup>47</sup> See *supra* note 5.

<sup>40</sup> See Exchange Rule 11.6(l)(3).

<sup>41</sup> See Nasdaq Rule 4703(e).

<sup>42</sup> See IEX Rule 11.190(h)(2).

<sup>43</sup> See *supra* note 5. The Exchange also notes that a letter was submitted in strong support of Nasdaq at the time they proposed similar changes to the operation of their Minimum Quantity order attribute under Nasdaq Rule 4703(e). See letter to the Commission from James J. Angel, Associate Professor of Finance, Georgetown University, dated November 26, 2014.

<sup>44</sup> See *supra* note 5.

<sup>37</sup> See Exchange Rule 11.8(b).

<sup>38</sup> For example, the Exchange's Post Only instruction. See Exchange Rule 11.6(n)(4).

<sup>39</sup> As noted, the proposal is designed to attract liquidity to the Exchange by allowing market participants to designate a minimum size of a contra-side order to interact with, thus providing them with functionality available to them on dark markets.

Act<sup>48</sup> and paragraph (f)(6) of Rule 19b-4 thereunder,<sup>49</sup> the Exchange has designated this rule filing as non-controversial. The Exchange has given the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission.

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: (1) Necessary or appropriate in the public interest; (2) for the protection of investors; or (3) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

#### IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

##### *Electronic Comments*

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-BatsEDGX-2017-34 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-BatsEDGX-2017-34. 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 Web site (<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 Web site 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; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-BatsEDGX-2017-34 and should be submitted on or before September 18, 2017.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>50</sup>

**Eduardo A. Aleman,**

*Assistant Secretary.*

[FR Doc. 2017-18127 Filed 8-25-17; 8:45 am]

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## SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-81453; File No. SR-NYSEArca-2017-88]

### Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing of Proposed Rule Change to List and Trade the Shares of the U.S. Equity Cumulative Dividends Fund—Series 2027 and the U.S. Equity Ex-Dividend Fund—Series 2027 Under NYSE Arca Equities Rule 8.200, Commentary .02

August 22, 2017.

Pursuant to Section 19(b)(1)<sup>1</sup> of the Securities Exchange Act of 1934 (“Act”)<sup>2</sup> and Rule 19b-4 thereunder,<sup>3</sup> notice is hereby given that, on August 8, 2017, NYSE Arca, Inc. (“Exchange” or “NYSE Arca”) 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 self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

<sup>50</sup> 17 CFR 200.30-3(a)(12).

<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 15 U.S.C. 78a.

<sup>3</sup> 17 CFR 240.19b-4.

### I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to list and trade the shares of the following under NYSE Arca Equities Rule 8.200, Commentary .02 (“Trust Issued Receipts”): The U.S. Equity Cumulative Dividends Fund—Series 2027 and the U.S. Equity Ex-Dividend Fund—Series 2027. The proposed change is available on the Exchange's Web site at [www.nyse.com](http://www.nyse.com), at the principal office of the Exchange, and at the Commission's Public Reference Room.

### II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those 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 parts of such statements.

#### A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

##### 1. Purpose

The Exchange proposes to list and trade shares (“Shares”) of the following under NYSE Arca Equities Rule 8.200, Commentary .02, which governs the listing and trading of Trust Issued Receipts: U.S. Equity Cumulative Dividends Fund—Series 2027 (the “Dividend Fund”) and U.S. Equity Ex-Dividend Fund—Series 2027 (the “Ex-Dividend Fund”, and together with the Dividend Fund, the “Funds” and each, a “Fund”).<sup>4</sup>

Each Fund will be a series of Metaurus Equity Component Trust (the “Trust”), a Delaware statutory trust.<sup>5</sup>

<sup>4</sup> Commentary .02 to NYSE Arca Equities Rule 8.200 applies to Trust Issued Receipts that invest in “Financial Instruments.” The term “Financial Instruments,” as defined in Commentary .02(b)(4) to NYSE Arca Equities Rule 8.200, means any combination of investments, including cash; securities; options on securities and indices; futures contracts; options on futures contracts; forward contracts; equity caps, collars, and floors; and swap agreements.

<sup>5</sup> On June 9, 2017, the Trust submitted to the Commission its draft registration statement on Form S-1 (the “Registration Statement”) under the Securities Act of 1933 (15 U.S.C. 77a) (“Securities Act”). The Jumpstart Our Business Startups Act, enacted on April 5, 2012, added Section 6(e) to the Securities Act. Section 6(e) of the Securities Act

<sup>48</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>49</sup> 17 CFR 240.19b-4.

Metaurus Advisors LLC (“Metaurus” or the “Sponsor”) will be the sponsor, commodity pool operator and commodity trading advisor of each Fund. SEI Investments Global Fund Services, (“SEI” or the “Administrator”), will be the Funds’ Administrator. The Administrator will be responsible for the day-to-day administration of the Trust and the Funds, which includes valuing all of the portfolio holdings of the Funds and calculating the net asset value (“NAV”) of the Funds. Brown Brothers Harriman & Co. (“BBH&Co.”) will serve as registrar and transfer agent for the Funds as well as custodian (the “Custodian”) for the Funds.

Each Fund is a commodity pool as defined in the Commodity Exchange Act<sup>6</sup> and the applicable regulations of the Commodity Futures Trading Commission (“CFTC”).

#### U.S. Equity Cumulative Dividends Fund—Series 2027

According to the Registration Statement, the Dividend Fund will seek investment results that, before fees and expenses, correspond to the performance of the Solactive U.S. Equity Cumulative Dividends Index—Series 2027 (the “Solactive Dividend Index”). The Dividend Fund will be a term fund that will terminate on or prior to December 31, 2027.

The Dividend Fund will seek to provide shareholders of the Dividend Fund with returns designed to replicate the dividends on constituent companies of the S&P 500 Index (“S&P 500”), without exposure to the underlying securities. The value of the Dividend Fund’s Shares will be affected by both the current level of such dividends and general expectations in the market regarding the future levels of such dividends.

The Dividend Fund intends primarily to invest its assets in the component instruments of the Solactive Dividend Index, as well as cash and cash

provides that an “emerging growth company” may confidentially submit to the Commission a draft registration statement for confidential, non-public review by the Commission staff prior to public filing, provided that the initial confidential submission and all amendments thereto shall be publicly filed not later than 21 days before the date on which the issuer conducts a road show, as such term is defined in Securities Act Rule 433(h)(4). An emerging growth company is defined in Section 2(a)(19) of the Securities Act as an issuer with less than \$1,000,000,000 total annual gross revenues during its most recently completed fiscal year. The Trust meets the definition of an emerging growth company and consequently has submitted its Form S-1 Registration Statement on a confidential basis with the Commission.

<sup>6</sup> 7 U.S.C. 1a(10).

equivalents.<sup>7</sup> The component instruments of the Solactive Dividend Index consist of U.S. Treasury Securities (“Treasury Securities”) and long positions in annual futures contracts listed on the Chicago Mercantile Exchange (“CME”) that provide exposure to dividends paid on the S&P 500 constituent companies (“Annual S&P 500 Dividend Futures Contracts”<sup>8</sup>) pro rata for each year of the life of the Dividend Fund. As a result, in addition to the Treasury Securities, cash and/or cash equivalents, the Dividend Fund is initially expected to hold each of the Annual S&P 500 Dividend Futures Contracts that are traded and expire during its ten-year term. Each year thereafter, until December 2027 when the Dividend Fund will terminate, the Dividend Fund will hold one less Annual S&P 500 Dividend Futures Contract due to expiry of the prior year’s contract.

The Dividend Fund expects to pay monthly cash distributions to its Shareholders throughout each calendar year. Such distributions shall, on an annual basis, before fees and expenses, equal all or a substantial portion of the Dividend Fund’s NAV attributable to the ordinary cash dividends accumulated by the S&P 500 Dividend Points Index (Annual) (the “Dividend Points Index”) for the year (as reflected in the current year’s Annual S&P 500 Dividend Futures Contracts held by the Dividend Fund).

The Dividend Fund’s exposure to dividend payments will be based on its

<sup>7</sup> For purposes of this filing, cash equivalents are short-term instruments with maturities of less than three months and shall include the following: (i) Certificates of deposit issued against funds deposited in a bank or savings and loan association; (ii) bankers’ acceptances, which are short-term credit instruments used to finance commercial transactions; (iii) repurchase agreements and reverse repurchase agreements; (iv) bank time deposits, which are monies kept on deposit with banks or savings and loan associations for a stated period of time at a fixed rate of interest; (v) commercial paper, which are short-term unsecured promissory notes; (vi) Treasury Securities, and (vii) money market funds, including exchange-traded funds (“ETFs”). For purposes of this filing, ETFs include Investment Company Units (as described in NYSE Arca Equities Rule 5.2(j)(3)); Portfolio Depositary Receipts (as described in NYSE Arca Equities Rule 8.100); and Managed Fund Shares (as described in NYSE Arca Equities Rule 8.600). The ETFs all will be listed and traded in the U.S. on registered exchanges. The ETFs in which a Fund may invest will be ETFs that invest principally in money market instruments. The Funds will not invest in inverse or leveraged (e.g., +2x, -2X) index ETFs.

<sup>8</sup> The Dividend Fund will hold the following Annual S&P 500 Dividend Futures Contracts: S&P 500 Annual Dividend Index Futures with annual expiry of 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, and 2027. CME Group, Inc. is a member of the Intermarket Surveillance Group (“ISG”). See note 20, *infra*.

investments in Annual S&P 500 Dividend Futures Contracts. According to the Registration Statement, the value of the Annual S&P 500 Dividend Futures Contracts, on which the value of the Dividend Fund will be based, will tend to increase if the actual dividends paid or expected to be paid by S&P 500 constituent companies in the periods tracked by the Annual S&P 500 Dividend Futures Contracts increase. The value of the Annual S&P 500 Dividend Futures Contracts will tend to decrease if the actual dividends paid or expected to be paid by S&P 500 constituent companies (as measured in the current year by the Dividend Points Index) decrease in the periods tracked by the Annual S&P 500 Dividend Futures Contracts.

#### Other Dividend Fund Investments

The Dividend Fund will invest primarily in the component instruments of the Solactive Dividend Index, cash and cash equivalents, as described above. In certain instances, however, the Dividend Fund may invest in quarterly S&P 500 dividend futures contracts<sup>9</sup> (the “Quarterly S&P 500 Dividend Futures Contracts”, and, together with the Annual S&P 500 Dividend Futures Contracts, the “Dividend Futures Contracts”), rather than the Annual S&P 500 Dividend Futures Contracts if, in the judgment of Metaurus, utilizing such alternative maturity instruments would be in the best interest of the Dividend Fund (e.g., due to liquidity or similar market factors).

The Dividend Fund will not employ leverage to implement its investment strategy. For these purposes, we interpret leverage to mean use of loans, borrowings and extensions of credit from third parties for the purchase of investments. The Dividend Fund may, however, enter into short-term loans and reverse repurchase agreements for liquidity purposes, including to fund distributions. The Dividend Fund will purchase all investments at market prices through the in-kind creation process or in the market place at the then-market price. Although the Dividend Fund will not employ the type of investment leverage described above, it will hold investment instruments that are described as having embedded leverage. For example, the futures contracts that the Dividend Fund will invest in could be described as having embedded leverage, because the

<sup>9</sup> The Dividend Fund will hold the following Quarterly S&P 500 Dividend Futures Contracts: S&P 500 Quarterly Dividend Index Futures with quarterly expiry of 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, and 2027. These contracts trade on the CME.

notional amount of the contracts will exceed the cash or assets required to establish or maintain such futures contract positions. Such embedded leverage is designed to be fully defeased by the Dividend Fund's Treasury Securities.

#### The Solactive Dividend Index

The Solactive Dividend Index is owned, maintained, calculated and distributed by Solactive AG, which is an independent index sponsor and data provider (the "Calculation Agent" or "Solactive"). According to the Registration Statement, the value of the Solactive Dividend Index is affected by the ordinary cash dividends that have been paid to date by constituent companies in the S&P 500 in the applicable period and the expectations of investors regarding the dividends to be paid by constituent companies in the S&P 500. The Annual S&P 500 Dividend Futures Contracts use the Dividend Points Index to track the cumulative amount of ordinary dividends paid by constituent companies in the S&P 500 in the current yearly period. The Dividend Points Index resets to zero on the third Friday of each December contemporaneously with the expiration of the applicable Annual S&P 500 Dividend Futures Contract. The Solactive Dividend Index is a price only index.

The Solactive Dividend Index aims to represent the discounted present value of all listed Annual S&P 500 Dividend Futures Contracts out to and including the December 2027 Annual S&P 500 Dividend Futures Contract. To accomplish this, each Annual S&P 500 Dividend Futures Contract market price will be discounted by using the computed yield of a specified Treasury Security with a similar or prior maturity date as the corresponding Annual S&P 500 Dividend Futures Contract expiry. After annual expiry of an Annual S&P 500 Dividend Futures Contract, such futures contract and its corresponding Treasury Security will be removed from the Solactive Dividend Index during the annual rebalancing of the Solactive Dividend Index.

The Solactive Dividend Index is calculated and published in USD via the price marketing services of Boerse Stuttgart AG based on the prices of the components ("Index Components") on the applicable listing exchanges posted by quotation services or otherwise as determined by Solactive. The most recent prices of all Index Components are used. Should there be no current price posted on the applicable price source, such as Reuters, Solactive will use the most recent price shown for

such investment on Reuters for the preceding trading day in making the calculation. The Solactive Dividend Index is widely disseminated every 15 seconds on each "Business Day"<sup>10</sup> by major market data vendors during the NYSE Arca's Core Trading Session.

The Solactive Dividend Index does not weigh the values of the components.

The Solactive Dividend Index is intended to be a static index in that the composition of the Solactive Dividend Index should not be expected to change after the Solactive Dividend Index has been originally constituted. A committee composed of staff from Solactive is responsible for decisions regarding the composition of the Solactive Dividend Index as well as any amendments to the index calculation methodology. Members of the committee can recommend changes to the index calculation methodology for calculating the Solactive Dividend Index and submit them to the committee for approval.<sup>11</sup>

All or a portion of the methodologies and algorithms used to calculate the Solactive Dividend Index are covered by one or more pending U.S. patents. The Sponsor developed the algorithm on which the Solactive Dividend Index is based and licensed it to Solactive. Solactive is not affiliated with the Sponsor and is solely responsible for calculating the Solactive Dividend Index.

All specifications and information relevant for calculating the Solactive Dividend Index are made available at <http://www.solactive.de>.

#### U.S. Equity Ex-Dividend Fund—Series 2027

According to the Registration Statement, the Ex-Dividend Fund will seek investment results that, before fees and expenses, correspond to the performance of the Solactive U.S. Equity Ex-Dividend Index—Series 2027 (the "Solactive Ex-Dividend Index", and together with the Solactive Dividend Index, the "Underlying Indexes"). The Ex-Dividend Fund will be a term fund that will terminate on or prior to December 31, 2027. The Ex-Dividend Fund will seek to provide shareholders of the Ex-Dividend Fund with returns that are equivalent to the performance of

<sup>10</sup> A Business Day is any day on which the NYSE Arca is open for business, including any partial-day opening.

<sup>11</sup> Members of the committee are subject to procedures designed to prevent the use and dissemination of material nonpublic information regarding changes to the Solactive Dividend Index and the Solactive Ex-Dividend Index.

the SPDR® S&P 500® ETF ("SPDRs")<sup>12</sup> less the value of current and future expected dividends on the S&P 500 constituent companies over the term of the Ex-Dividend Fund.

The Solactive Ex-Dividend Index tracks the performance of SPDRs together with the performance of short positions in the Annual S&P 500 Dividend Futures Contracts for each year from the Ex-Dividend Fund's launch date through December 2027.

In seeking to track the Solactive Ex-Dividend Index, the Ex-Dividend Fund intends to replicate the returns of SPDRs through owning long positions in quarterly S&P 500 Index futures contracts (the "Quarterly S&P 500 Index Futures Contracts") rather than shares of SPDRs.<sup>13</sup> Additionally, the Ex-Dividend Fund intends to track the performance of the Solactive Ex-Dividend Index by selling Annual S&P 500 Dividend Futures Contracts out to the maturity date of the Ex-Dividend Fund. The Ex-Dividend Fund will also hold Treasury Securities, cash and/or cash equivalents. The Ex-Dividend Fund does not intend to hold shares of SPDRs or any other ETF (other than a money market fund ETF).

#### Other Ex-Dividend Fund Investments

The Ex-Dividend Fund will primarily invest in Quarterly S&P 500 Index Futures Contracts as described above. In certain instances, however, the Ex-Dividend Fund may invest in (i) annual S&P 500 Index futures contracts<sup>14</sup> (the "Annual S&P 500 Index Futures Contracts", and, together with the Quarterly S&P 500 Index Futures Contracts, the "Index Futures Contracts") and (ii) Quarterly S&P 500 Dividend Futures Contracts, in each case, if, in the judgment of Metaurus, utilizing such alternative maturity instruments would be in the best interest of the Ex-Dividend Fund (e.g., due to liquidity, arbitrage pricing or similar market factors).

The Ex-Dividend Fund will not employ leverage to implement its investment strategy. For these purposes, we interpret leverage to mean use of loans, borrowings and extensions of credit from third parties for the purchase of investments. The Ex-Dividend Fund may, however, enter into short-term loans and reverse repurchase agreements for liquidity purposes. The Ex-Dividend Fund will

<sup>12</sup> Shares of SPDRs are listed and traded on the Exchange pursuant to NYSE Arca Equities Rule 8.100 (Portfolio Depositary Receipts).

<sup>13</sup> The Quarterly S&P 500 Index Futures Contracts include: (i) S&P 500 Futures; and (ii) E-mini S&P 500 Futures. These contracts trade on the CME.

<sup>14</sup> These contracts trade on the CME.

purchase all investments at market prices through the in-kind creation process or in the market place at the then-market price. Although the Ex-Dividend Fund will not employ the type of investment leverage described above, it will hold investment instruments that are described as having embedded leverage. For example, the futures contracts that the Ex-Dividend Fund will invest in could be described as having embedded leverage, because the notional amount of the contracts will exceed the cash or assets required to establish or maintain such futures contract positions. Such embedded leverage is designed to be fully defeased by the Ex-Dividend Fund's Treasury Securities.

#### The Solactive Ex-Dividend Index

According to the Registration Statement, the Solactive Ex-Dividend Index aims to represent the current value of 0.5 shares of SPDRs, less the current value of ordinary cash dividends expected to be paid on the S&P 500, until the Ex-Dividend Fund's maturity. The current value of such dividends is represented by the Solactive Dividend Index. The Solactive Dividend Index aims to represent the discounted present value of all listed Annual S&P 500 Dividend Futures Contracts out to and including the December 2027 Annual S&P 500 Dividend Futures Contracts expiry.

The Solactive Ex-Dividend Index includes shares of SPDRs and short positions in Annual S&P 500 Dividend Futures Contracts for each year from the Ex-Dividend Fund's launch date through December 2027.

The Solactive Ex-Dividend Index is an index of Solactive and is owned, maintained, calculated and distributed by Solactive. The Solactive Ex-Dividend Index is a price-only index.

The Solactive Ex-Dividend Index is calculated and published in USD via the price marketing services of Boerse Stuttgart AG based on the prices of the Index Components on the applicable listing exchanges posted by quotation services or otherwise as determined by Solactive. The most recent prices of all Index Components are used. Should there be no current price posted on the applicable price source, such as Reuters, Solactive will use the most recent price shown for such investment on Reuters for the preceding trading day in making the calculation. The Solactive Ex-Dividend Index is widely disseminated every 15 seconds on each Business Day by major market data vendors during the NYSE Arca's Core Trading Session.

Because the Solactive Ex-Dividend Index tracks the performance of 0.5

Shares of SPDRs and sums up the discounted values of the Annual S&P 500 Dividend Futures Contracts, no weighting is applied.

The Solactive Ex-Dividend Index is intended to be a static index in that the composition of the Solactive Ex-Dividend Index should not be expected to change after the Solactive Ex-Dividend Index has been originally constituted. A committee composed of staff from Solactive is responsible for decisions regarding the composition of the Solactive Ex-Dividend Index as well as any amendments to the index calculation methodology. Members of the committee can recommend changes to the index calculation methodology for calculating the Solactive Ex-Dividend Index and submit them to the committee for approval.

All or a portion of the methodologies and algorithms used to calculate the Solactive Ex-Dividend Index are covered by one or more pending U.S. patents. The Sponsor developed the algorithm on which the Solactive Ex-Dividend Index is based and licensed it to Solactive. Solactive is not affiliated with the Sponsor and is solely responsible for calculating the Solactive Ex-Dividend Index.

All specifications and information relevant for calculating the Solactive Ex-Dividend Index are made available at <http://www.solactive.de>.

#### Creation and Redemption of Shares

According to the Registration Statement, the Trust will issue and sell Shares of a Fund in one or more block size aggregations of 100,000 Shares (each, a "Basket") on a continuous basis through the Distributor at a Fund's NAV next determined after receipt, on any Business Day, of an order in proper form. The size of a Basket is subject to change. Proceeds received by the Funds from the issuance and sale of Baskets will consist of cash, in the case of a cash creation, or futures contracts, Treasury Securities and other financial instruments designed to track such Fund's Underlying Index ("Deposit Instruments"), together with the deposit of a specified cash payment ("Cash Component"), in the case of an in-kind creation, as described below. The Cash Component is the difference between the NAV attributable to a Basket and the aggregate market value of the Deposit Instruments exchanged for the Basket. The party conveying instruments with the lower value will pay to the other such difference. A difference may occur where the market value of the Deposit Instruments, as applicable, changes relative to the NAV of a Fund due to the fact that a position cannot be transferred

in kind, instruments cannot be broken up, minor differences due to rounding or due to a rebalancing of a Fund to match the Underlying Index. The cash amount announced by a Fund at the beginning of each day is a Fund's estimate of the actual cash amount. In the case of a cash creation, the Funds intend to use the cash to purchase Deposit Instruments.

The consideration for purchase of a Basket of Shares of the Funds will generally be conducted on an in-kind basis through an exchange for related positions transactions, effected pursuant to the rules of the CME (an "EFRP"). The EFRP will consist of the exchange between the Funds and their Authorized Participants (as defined below) of Deposit Instruments (comprised of futures contracts, Treasury Securities and the Cash Component) for Shares. Together, the Deposit Instruments and the Cash Component constitute the "Portfolio Deposit," which represents the minimum initial and subsequent investment amount for a Basket of a Fund.<sup>15</sup>

According to the Registration Statement, the Funds reserve the right to permit or require the substitution of an amount of cash (a "cash in lieu" amount) to be added to the Cash Component to replace any Deposit Instrument which may not be available in sufficient quantity for delivery or that is not be eligible for transfer through an EFRP or for other similar reasons. In this case, a Fund will utilize the cash in lieu amount to purchase the missing Deposit Instruments, which, in the case of the futures contracts, will generally be effected through a purchase on the CME or through a block trade, if permissible under CME rules for the futures contracts comprising the missing futures contracts, and through purchases through banks, government securities dealers and broker-dealers, in the case of the Treasury Securities.

The Funds will make available through the National Securities Clearing Corporation ("NSCC") on each Business Day, prior to the opening of business of the Exchange's Core Trading Session (currently 9:30 a.m., Eastern Time

<sup>15</sup> According to the Registration Statement, because the Funds hold futures contracts, the exchange of these instruments will be conducted in accordance with the rules of the CME. In connection with an EFRP, the "Authorized Participant" (as defined below) would be required to deliver to a Fund, through a Fund's Clearing Futures Commission Merchant, futures contracts and Treasury Securities, replicating a pro rata slice of a Fund's portfolio invested in those instruments and the Cash Component, together having a value equal to the NAV of the Basket, in exchange for delivery to the Authorized Participant, through DTC, of the Basket.

("E.T."), the list of the names and the required amount of each Deposit Instrument to be included in the current Portfolio Deposit (based on information at the end of the previous Business Day) for the Funds. Such Deposit Instruments will be applicable, subject to any adjustments as described below, to purchases of Baskets of the Funds until such time as the next-announced Deposit Instruments composition is made available. In addition to the list of names and numbers of instruments constituting the current Deposit Instruments of a Portfolio Deposit, on each Business Day, an estimate of the Cash Component, per outstanding Basket of a Fund, will be made available at the same time.

Baskets of Shares may be purchased only by or through institutions that (1) are registered broker-dealers and, if required in connection with their activities, are registered futures commission merchants, (2) are members of the Depository Trust Company ("DTC"), and (3) have entered into agreements to act as authorized participants of the Trust ("Authorized Participants").

An Authorized Participant must submit an irrevocable purchase order no later than the earlier of (i) 2:00 p.m., E.T. or (ii) two hours prior to the scheduled closing time of the Exchange's Core Trading Session on any Business Day in order to receive that Business Day's NAV.

#### Redemption of Shares

Shares of the Funds may be redeemed only in Baskets at their NAV next determined after receipt of a redemption request in proper form by the Distributor.

By placing a redemption order, an Authorized Participant agrees to (1) deliver the "Redemption Basket" to be redeemed through DTC's book-entry system to a Fund's account with the Custodian not later than 3:00 p.m. E.T. on the Business Day following the effective date of the redemption order, and (2) if required by the Sponsor in its sole discretion, enter into or arrange an EFRP or block trade, or any other over-the-counter transaction (through itself or a designated acceptable broker) with a Fund for the sale of a number and type of futures contracts at the closing settlement price for such contracts on the effective date of the redemption order.

The Funds will make available through the NSCC prior to the opening of the NYSE Arca's Core Trading Session (currently 9:30 a.m., E.T.) on each Business Day, the identity and number of "Deposit Instruments" that

will be applicable (subject to possible amendment or correction) to redemption requests received in proper form on that day. Deposit Instruments received on redemption may not be identical to Deposit Instruments that are applicable to creation of Baskets. Unless cash redemptions are available or specified for a Fund, the redemption proceeds for a Basket generally will consist of Deposit Instruments on the Business Day of the request for redemption, plus cash in an amount equal to the difference between the NAV of the Shares being redeemed, as next determined after a receipt of a request in proper form, and the value of the Deposit Instruments, less a fixed redemption transaction fee.

An Authorized Participant must submit an irrevocable redemption request no later than the earlier of (i) 2:00 p.m., E.T. or (ii) two hours prior to the scheduled closing time of the Exchange's Core Trading Session on any Business Day in order to receive that Business Day's NAV.

#### Net Asset Value

The NAV per Share for a Fund will be determined by dividing the NAV of a Fund by the number of outstanding Shares of a Fund. The NAV of each Fund will be calculated as soon as practicable after the close of trading of the Shares on the NYSE Arca's Core Trading Session (normally 4:00 p.m. E.T.) on each Business Day. Each Fund's NAV on a Business Day will be obtained by subtracting accrued expenses and other liabilities borne by such Fund, if any, from the total value of the assets held by a Fund, in each case, as of the time of calculation.

The value of the Dividend Futures Contracts and the Index Futures Contracts (together, the "S&P 500 Futures Contracts") will be determined by the Administrator by using the closing or settlement price published by the CME or, in the case of a market disruption, the last traded price before settlement. Cash equivalents (with the exception of money market funds and ETFs) will be valued on the basis of broker quotes or valuations provided by a third party pricing service. Money market funds will be valued at NAV. ETFs will be valued based on the last sale price on the applicable exchange.

#### Indicative Fund Value

In addition, in order to provide updated information relating to a Fund for use by investors and market professionals, an updated "Indicative Fund Value" ("IFV") will be calculated and disseminated throughout the Exchange's Core Trading Session of 9:30

a.m. E.T. to 4:00 p.m. E.T. on each trading day. The IFV will be calculated by using the prior day's closing NAV per Share of a Fund as a base and updating that value throughout the trading day to reflect changes in the most recently reported trade prices for the S&P 500 Futures Contracts on the CME. The IFV will be disseminated on a per Share basis for each Fund every 15 seconds during the Exchange's Core Trading Session.

#### Availability of Information

The NAV for the Funds' Shares will be disseminated daily to all market participants at the same time. The Exchange will make available on its Web site at no charge daily trading volume of the Shares of each Fund, closing prices of such Shares, and number of Shares outstanding. The intraday, closing prices, and settlement prices of the S&P 500 Futures Contracts will be readily available from the CME Web site, automated quotation systems, published or other public sources, or major market data vendors. Pricing information for cash equivalents is available from major market data vendors. In addition, price information for ETFs is available from the applicable exchange. Quotation information from brokers and dealers or pricing services is available for Treasury Securities.

Complete real-time data for the S&P 500 Futures Contracts is available by subscription through on-line information services. CME also provides delayed futures information on current and past trading sessions and market news free of charge on its Web site. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the Consolidated Tape Association ("CTA"). The IFV will be available through on-line information services. The S&P 500 Futures Contracts trading prices will be disseminated by one or more major market data vendors every 15 seconds during the NYSE Arca's Core Trading Session of 9:30 a.m. to 4:00 p.m. E.T.

In addition, the Funds' Web site, [www.metaurus.com](http://www.metaurus.com), will display the applicable end of day closing NAV. The daily holdings of each Fund will be available on the Funds' Web site before 9:30 a.m. E.T. each day. The Web site disclosure of portfolio holdings will be made daily and will include, as applicable, (i) the composite value of the total portfolio, (ii) the quantity and type of each holding (including the ticker symbol, maturity date or other identifier, if any) and other descriptive information, (iii) the value of each Treasury Security and cash

equivalent,<sup>16</sup> and (iv) the amount of cash held in each Fund's portfolio. The Funds' Web site will be publicly accessible at no charge.

This Web site disclosure of each Fund's daily holdings will occur at the same time as the disclosure by the Trust of the daily holdings to Authorized Participants so that all market participants are provided daily holdings information at the same time. Therefore, the same holdings information will be provided on the public Web site as well as in electronic files provided to Authorized Participants. Accordingly, each investor will have access to the current daily holdings of each Fund through the Funds' Web site.

#### Trading Halts

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Shares of a Fund.<sup>17</sup> Trading in Shares of a Fund will be halted if the circuit breaker parameters in NYSE Arca Equities Rule 7.12 have been reached. Trading also may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares of a Fund inadvisable.

The Exchange may halt trading during the day in which an interruption to the dissemination of the IFV or the value of an Underlying Index occurs. If the interruption to the dissemination of the IFV, or the value of an Underlying Index persists past the trading day in which it occurred, the Exchange will halt trading no later than the beginning of the trading day following the interruption. In addition, if the Exchange becomes aware that the NAV with respect to the Shares is not disseminated to all market participants at the same time, it will halt trading in the Shares until such time as the NAV is available to all market participants.

#### Trading Rules

The Exchange deems the Shares to be equity securities, thus rendering trading in the Shares subject to the Exchange's existing rules governing the trading of equity securities. Shares will trade on the NYSE Arca Marketplace from 4 a.m. to 8 p.m. E.T. in accordance with NYSE Arca Equities Rule 7.34 (Early, Core, and Late Trading Sessions). The Exchange has appropriate rules to facilitate transactions in the Shares during all trading sessions. As provided in NYSE Arca Equities Rule 7.6, the

minimum price variation ("MPV") for quoting and entry of orders in equity securities traded on the NYSE Arca Marketplace is \$0.01, with the exception of securities that are priced less than \$1.00 for which the MPV for order entry is \$0.0001.

The Shares will conform to the initial and continued listing criteria under NYSE Arca Equities Rule 8.200. The trading of the Shares will be subject to NYSE Arca Equities Rule 8.200, Commentary .02(e), which sets forth certain restrictions on Equity Trading Permit ("ETP") Holders acting as registered Market Makers in Trust Issued Receipts to facilitate surveillance. The Exchange represents that, for initial and continued listing, the Funds will be in compliance with Rule 10A-3<sup>18</sup> under the Act, as provided by NYSE Arca Equities Rule 5.3. A minimum of 100,000 Shares of a Fund will be outstanding at the commencement of trading on the Exchange.

#### Surveillance

The Exchange represents that trading in the Shares will be subject to the existing trading surveillances administered by the Exchange, as well as cross-market surveillances administered by the Financial Industry Regulatory Authority ("FINRA") on behalf of the Exchange, which are designed to detect violations of Exchange rules and applicable federal securities laws.<sup>19</sup> The Exchange represents that these procedures are adequate to properly monitor Exchange trading of the Shares of the Funds in all trading sessions and to deter and detect violations of Exchange rules and federal securities laws applicable to trading on the Exchange.

The surveillances referred to above generally focus on detecting securities trading outside their normal patterns, which could be indicative of manipulative or other violative activity. When such situations are detected, surveillance analysis follows and investigations are opened, where appropriate, to review the behavior of all relevant parties for all relevant trading violations.

The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares and S&P 500 Futures Contracts with other markets and other entities that are members of

the ISG, and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading in the Shares and S&P 500 Futures Contracts from such markets and other entities. In addition, the Exchange may obtain information regarding trading in the Shares and S&P 500 Futures Contracts from markets and other entities that are members of ISG or with which the Exchange has in place a comprehensive surveillance sharing agreement ("CSSA").<sup>20</sup>

In addition, the Exchange also has a general policy prohibiting the distribution of material, non-public information by its employees.

All statements and representations made in this filing regarding (a) the description of the portfolios, indexes and reference assets, (b) limitations on portfolio holdings, indexes and reference assets, or (c) applicability of Exchange listing rules specified in this filing shall constitute continued listing requirements for listing the Shares on the Exchange.

The issuer has represented to the Exchange that it will advise the Exchange of any failure by a Fund to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Act, the Exchange will monitor for compliance with the continued listing requirements. If a Fund is not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under NYSE Arca Equities Rule 5.5(m).

#### Information Bulletin

Prior to the commencement of trading, the Exchange will inform its ETP Holders in an Information Bulletin of the special characteristics and risks associated with trading the Shares. Specifically, the Information Bulletin will discuss the following: (1) The risks involved in trading the Shares during the Early and Late Trading Sessions when an updated IFV will not be calculated or publicly disseminated; (2) the procedures for purchases and redemptions of Shares in Baskets (and that Shares are not individually redeemable); (3) NYSE Arca Equities Rule 9.2(a), which imposes a duty of due diligence on its ETP Holders to learn the essential facts relating to every customer prior to trading the Shares; (4) how information regarding the IFV is disseminated; (5) how information regarding portfolio holdings is

<sup>16</sup> Other than the futures contracts described herein and cash, Treasury Securities and cash equivalents are the only types of portfolio holdings that the Funds may hold.

<sup>17</sup> See NYSE Arca Equities Rule 7.12.

<sup>18</sup> 17 CFR 240.10A-3.

<sup>19</sup> FINRA conducts cross-market surveillances on behalf of the Exchange pursuant to a regulatory services agreement. The Exchange is responsible for FINRA's performance under this regulatory services agreement.

<sup>20</sup> For a list of the current members of ISG, see [www.isgportal.org](http://www.isgportal.org). The Exchange notes that not all components of the Funds may trade on markets that are members of ISG or with which the Exchange has in place a CSSA.

disseminated; (6) the requirement that ETP Holders deliver a prospectus to investors purchasing newly issued Shares prior to or concurrently with the confirmation of a transaction; and (7) trading information.

In addition, the Information Bulletin will advise ETP Holders, prior to the commencement of trading, of the prospectus delivery requirements applicable to a Fund. The Exchange notes that investors purchasing Shares directly from a Fund will receive a prospectus. ETP Holders purchasing Shares from a Fund for resale to investors will deliver a prospectus to such investors. The Information Bulletin will also discuss any exemptive, no-action, and interpretive relief granted by the Commission from any rules under the Act. In addition, the Information Bulletin will reference that a Fund is subject to various fees and expenses described in the Registration Statement. The Information Bulletin will also reference that the CFTC has regulatory jurisdiction over the trading of stock index futures traded on U.S. markets.

The Information Bulletin will also disclose the trading hours of the Shares and that the NAV for the Shares will be calculated after 4:00 p.m. E.T. each trading day. The Information Bulletin will disclose that information about the Shares will be publicly available on the Funds' Web site.

## 2. Statutory Basis

The basis under the Act for this proposed rule change is the requirement under Section 6(b)(5)<sup>21</sup> that an exchange has rules that are 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, in general, to protect investors and the public interest.

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed and traded on the Exchange pursuant to the initial and continued listing criteria in NYSE Arca Equities Rule 8.200. The Exchange has in place surveillance procedures that are adequate to properly monitor trading in the Shares of the Funds in all trading sessions and to deter and detect violations of Exchange rules and applicable federal securities laws. The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares, and S&P 500 Futures Contracts with

other markets and other entities that are members of the ISG, and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading in the Shares and S&P 500 Futures Contracts from such markets and other entities. In addition, the Exchange may obtain information regarding trading in the Shares and S&P 500 Futures Contracts from markets and other entities that are members of ISG or with which the Exchange has in place a CSSA. All S&P 500 Futures Contracts are traded on CME, an ISG member. The Exchange will make available on its Web site daily trading volume of each of the Funds' Shares, closing prices of such Shares, and number of Shares outstanding. The intraday, closing prices, and settlement prices of the S&P 500 Futures Contracts will be readily available from the applicable exchange Web site, automated quotation systems, published or other public sources, or on-line information services.

Complete real-time data for S&P 500 Futures Contracts is available by subscription from on-line information services. CME also provides delayed futures information on current and past trading sessions and market news free of charge on its Web site. Information regarding exchange-traded cash-settled options and cleared swap contracts will be available from the applicable exchanges and major market data vendors. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the CTA. In addition, the Funds' Web site will display the applicable end of day closing NAV. The daily holdings of each Fund will be disclosed on the Funds' Web site before 9:30 a.m. E.T. each day. The Web site disclosure of portfolio holdings will be made daily and will include, as applicable, (i) the composite value of the total portfolio, (ii) the name and value of S&P 500 Futures Contracts, (iii) the name and value of each Treasury Security and cash equivalent, and (iv) the amount of cash held in each Fund's portfolio.

Moreover, prior to the commencement of trading, the Exchange will inform its Equity Trading Permit Holders in an Information Bulletin of the special characteristics and risks associated with trading the Shares. Trading in Shares of a Fund will be halted if the circuit breaker parameters in NYSE Arca Equities Rule 7.12 have been reached or because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable.

The proposed rule change is designed to perfect the mechanism of a free and open market and, in general, to protect

investors and the public interest in that it will facilitate the listing and trading of additional types of Trust Issued Receipts based in part on futures prices that will enhance competition among market participants, to the benefit of investors and the marketplace. As noted above, the Exchange has in place surveillance procedures that are adequate to properly monitor trading in the Shares in all trading sessions and to deter and detect violations of Exchange rules and applicable federal securities laws.

### *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 purpose of the Act. The Exchange notes that the proposed rule change will facilitate the listing and trading of additional types of issues of Trust Issued Receipts based on futures indexes and that will enhance competition among market participants, to the benefit of investors and the marketplace.

### *C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others*

No written comments were solicited or received with respect to the proposed rule change.

## III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or 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:

<sup>21</sup> 15 U.S.C. 78f(b)(5).

*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](mailto:rule-comments@sec.gov). Please include File Number SR-NYSEArca-2017-88 on the subject line.

*Paper Comments*

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549-1090.

All submissions should refer to File Number SR-NYSEArca-2017-88. 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 Web site (<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 Web site 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; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-NYSEArca-2017-88 and should be submitted on or before September 18, 2017.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>22</sup>

**Eduardo A. Aleman,**  
*Assistant Secretary.*

[FR Doc. 2017-18125 Filed 8-25-17; 8:45 am]

**BILLING CODE 8011-01-P**

**SECURITIES AND EXCHANGE COMMISSION**

[Release No. 34-81454; File No. SR-BatsEDGA-2017-21]

**Self-Regulatory Organizations; Bats EDGA Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Rule 11.8, Order Types, To Permit Midpoint Discretionary Orders To Be Non-Displayed**

August 22, 2017.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on August 11, 2017, Bats EDGA Exchange, Inc. (the "Exchange" or "EDGA") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange has designated this proposal as a "non-controversial" proposed rule change pursuant to Section 19(b)(3)(A) of the Act<sup>3</sup> and Rule 19b-4(f)(6)(iii) thereunder,<sup>4</sup> which renders it effective upon filing with the Commission. 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 filed a proposed rule change to permit MidPoint Discretionary Orders ("MDO") to be Non-Displayed<sup>5</sup> by amending paragraph (e) of Exchange Rule 11.8, Order Types.

The text of the proposed rule change is available at the Exchange's Web site at [www.bats.com](http://www.bats.com), at the principal office of the Exchange, and at the Commission's Public Reference Room.

**II. Self-Regulatory Organization's Statement of the Purpose of, and 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 parts of such statements.

(A) *Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change*

1. Purpose

An MDO is a limit order to buy that is displayed at and pegged to the National Best Bid ("NBB"), with discretion to execute at prices up to and including the midpoint of the National Best Bid and Offer ("NBBO"), or a limit order to sell that is displayed at and pegged to the National Best Offer ("NBO"), with discretion to execute at prices down to and including the midpoint of the NBBO.<sup>6</sup> MDOs are designed to exercise discretion to execute to the midpoint of the NBBO and provide price improvement over the NBBO.

Currently, an MDO is displayed on the EDGA Book<sup>7</sup> at the NBB or NBO to which it is pegged. The Exchange now proposes to permit Users<sup>8</sup> to elect that their MDO be Non-Displayed on the EDGA Book by amending paragraph (e) of Exchange Rule 11.8, Order Types. Therefore, the Exchange proposes to add new paragraph (4) to the description of MDOs under Rule 11.8(e) stating that an MDO will default to a Displayed<sup>9</sup> instruction unless the User includes a Non-Displayed instruction on the order and will be Displayed or Non-Displayed on the EDGA Book at its pegged or limit price in accordance with paragraph (e) of Rule 11.8.<sup>10</sup> The price to which an MDO is pegged to, whether Displayed or Non-Displayed, will continue to operate in the same manner as it does today in all other respects. Proposed paragraph (4) of Rule 11.8(e) would also specify that a User may elect that its MDO that is displayed on the EDGA Book include the User's market participant identifier ("MPID") by selecting the Attributable instruction.<sup>11</sup> Otherwise, an MDO with a Displayed instruction will automatically default to a Non-Attributable<sup>12</sup> instruction. This is consistent with the current operation of orders that are to be displayed on the EDGA Book.<sup>13</sup>

<sup>6</sup> See Exchange Rule 11.8(e) for a complete description of the operation of MDOs.

<sup>7</sup> See Exchange Rule 1.5(d).

<sup>8</sup> See Exchange Rule 1.5(ee).

<sup>9</sup> See Exchange Rule 11.6(e)(1).

<sup>10</sup> The Exchange proposes to renumber existing paragraph (4) as (5) and to increase the numbering of each following paragraph under Rule 11.8(e) accordingly.

<sup>11</sup> See Exchange Rule 11.6(a).

<sup>12</sup> See Exchange Rule 11.6(a)(1).

<sup>13</sup> See e.g., Exchange Rule 11.8(b)(4).

<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

<sup>3</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>4</sup> 17 CFR 240.19b-4(f)(6)(iii).

<sup>5</sup> See Exchange Rule 11.6(e)(2).

<sup>22</sup> 17 CFR 200.30-3(a)(12).

The Exchange also proposes to make certain revisions to paragraph (e) of Rule 11.8 to account for enabling Users to elect that an MDO to be Non-Displayed. These revisions include deleting references to “displayed” prices and replacing certain references to “displayed” with “pegged”. As stated above and as currently set forth in Rule 11.8(e), the price at which an MDO is displayed on the EDGA Book is either the NBB or NBO to which it is pegged. An MDO that is to be Non-Displayed will operate in the same manner but its pegged price will simply not be displayed on the EDGA Book. Therefore, deleting references to “displayed” prices and replacing certain references to “displayed” with “pegged” would not affect the operation of an MDO other than to account for when an MDO is Non-Displayed. First, the Exchange proposes to amend the first sentence of paragraph (e) of Rule 11.8 to delete references to “displayed”. As a result, an MDO would be defined as “a limit order to buy that is pegged to the NBB, with discretion to execute at prices up to and including the midpoint of the NBBO, or a limit order to sell that is pegged to the NBO, with discretion to execute at prices down to and including the midpoint of the NBBO.” References to “displayed” throughout the remainder of paragraph (e) of Rule 11.8 would be replaced by “pegged”. Therefore, the rule would state that an MDO’s pegged price, like its displayed price today, and Discretionary Range<sup>14</sup> are bound by its limit price.<sup>15</sup> The pegged prices of an MDO, like its displayed price today, will continue to be derived from the NBB or NBO, and will continue to be unable to independently establish or maintain the NBB or NBO.

The Exchange also proposes to amend renumbered paragraph (7) to make two non-substantive, clarifying changes and to replace the term “displayed” with “pegged”. The current language states that an MDO with a limit price and time-in-force of Day that rests on the EDGA Book will be repriced. The Exchange proposes to delete the phrase “with a limit price and a time-in-force of Day” as all MDOs must include a limit price and may include time-in-force instructions other than Day that would cause them to rest on the EDGA Book, such as RHO, GTX, and GTD.

<sup>14</sup> See Exchange Rule 11.6(d). The Exchange also proposes to capitalize all references to the defined term “Discretionary Range” within Rule 11.8(e).

<sup>15</sup> An MDO to buy or sell with a limit price that is less than the prevailing NBB or higher than the prevailing NBO, respectively, will continue to be posted to the EDGA Book at its limit price. See Exchange Rule 11.8(e).

Paragraph (7) also states that the pegged price of an MDO that is resting on the EDGA Book will be adjusted in response to changes in the midpoint of the NBBO. While this language is technically correct and the midpoint of the NBBO will change in the case where either the NBB or NBO changes, the Exchange proposes to amend paragraph (7) to clarify that the pegged price will be adjusted in response to changes in the NBB or NBO as those are the prices that the pegged price tracks. Lastly, the amended rule would state that any unexecuted portion of an MDO that is resting on the EDGA Book will receive a new time stamp each time its pegged price, rather than displayed price, is automatically adjusted in response to changes in the NBBO.

Today, for purposes of MDO priority, the displayed price of an MDO is treated like a Limit Order that is displayed on the EDGA Book.<sup>16</sup> Limit Orders with a Non-Displayed instruction have priority behind Limit Orders with a Displayed instruction resting on the EDGA Book.<sup>17</sup> In order to continue to treat MDO priority consistent with that of Limit Orders, and not like other orders with a Pegged instruction, the Exchange proposes that an MDO with a Non-Displayed instruction will have the same priority as Limit Orders with a Non-Displayed instruction when executed at their pegged price. As a result, the Exchange proposes to amend paragraph (a)(2)(C)(i) of Rule 11.9 to specify that, for purposes of order priority, the pegged price of an MDO, like its displayed price today, will be treated as a Limit Order, as defined in Exchange Rule 11.8(b). This change is designed to account for the pegged price of an MDO being Displayed or Non-Displayed and the proposed priority of an MDO with a Non-Displayed instruction. MDOs executed in their Discretionary Range will maintain the same priority as they do today regardless of whether their pegged price is displayed on the EDGA Book.<sup>18</sup>

## 2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act<sup>19</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act<sup>20</sup> in particular, in that it is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to

<sup>16</sup> See Exchange Rule 11.9(a)(2)(C)(i).

<sup>17</sup> See Exchange Rule 11.9(a)(2)(A)(ii).

<sup>18</sup> See Exchange Rule 11.9(a)(2)(A)(iv).

<sup>19</sup> 15 U.S.C. 78f(b).

<sup>20</sup> 15 U.S.C. 78f(b)(5).

remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest. The proposed rule change promotes just and equitable principles of trade because it would provide Users who utilize MDOs with additional flexibility by enabling such Users to elect that the pegged price of the MDO not be displayed on the EDGA Book. All other aspects of an MDO will remain unchanged. Allowing for the non-display of MDOs on the EDGA Book would minimize the market impact of larger orders. The proposed rule change may also incentivize Users to enter MDOs with large sizes thereby increasing liquidity at the NBBO as well as the midpoint of the NBBO, resulting in increased price improvement opportunities for contra-side orders. The Exchange notes that electing that an MDO be Non-Displayed would be voluntary, and that such orders will default to Displayed unless the User elects Non-Displayed.

Furthermore, the Exchange notes that NYSE Arca, Inc. (“NYSE Arca”) and the Investors Exchange LLC (“IEX”) both currently offer order types that peg to the NBBO with discretion to execute to the midpoint of the NBBO and allow for the order’s pegged price to not be displayed on their respective order books.<sup>21</sup>

Lastly, the Exchange believes the non-substantive clarifying changes to Exchange Rule 11.8(e) remove impediments to and perfect the mechanism of a free and open market and a national market system as they seek to remove or correct in order to ensure the rule accurately reflects the operation of MDOs and avoid potential investor confusion.

Therefore, the Exchange believes the proposal removes impediments to and perfects the mechanism of a free and open market and a national market system, and, in general, protects investors and the public interest.

### (B) Self-Regulatory Organization’s Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in

<sup>21</sup> See NYSE Arca Rule 7.31(h)(3) (defining the Discretionary Pegged Order). See also Securities Exchange Act Release No. 78181 (June 28, 2016), 81 FR 43297 (July 1, 2016) (order approving the Discretionary Pegged Order). See IEX Rule 11.190(a)(3) (defining Pegged Orders as a non-displayed order which may be pegged to the inside quote on the same side of the market with discretion to the midpoint of the NBBO, *i.e.*, Discretionary Peg orders). See also Securities Exchange Act Release No. 78101 (June 17, 2016), 81 FR 41141 (June 23, 2016) (order approving the IEX exchange application, which included IEX’s Pegged Orders and Discretionary Peg Order).

any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act, as amended. On the contrary, the Exchange believes the proposed rule change promotes competition because it will enable the Exchange to offer functionality similar to that offered by NYSE Arca and IEX.<sup>22</sup> Therefore, the Exchange does not believe the proposed rule change will result in any burden on intermarket 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*

No comments were solicited or received on the proposed rule change.

**III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action**

Because the foregoing proposed rule change does not: (A) Significantly affect the protection of investors or the public interest; (B) impose any significant burden on competition; and (C) by its terms, become operative for 30 days from the date on which it was filed or such shorter time as the Commission may designate it has become effective pursuant to Section 19(b)(3)(A) of the Act<sup>23</sup> and paragraph (f)(6) of Rule 19b-4 thereunder,<sup>24</sup> the Exchange has designated this rule filing as non-controversial. The Exchange has given the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission.

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: (1) Necessary or appropriate in the public interest; (2) for the protection of investors; or (3) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

**IV. Solicitation of Comments**

Interested persons are invited to submit written data, views, and arguments concerning the foregoing,

including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

*Electronic Comments*

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-BatsEDGA-2017-21 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-BatsEDGA-2017-21. 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 Web site (<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 Web site 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; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-BatsEDGA-2017-21 and should be submitted on or before September 18, 2017.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>25</sup>

**Eduardo A. Aleman,**  
*Assistant Secretary.*

[FR Doc. 2017-18126 Filed 8-25-17; 8:45 am]

**BILLING CODE 8011-01-P**

**SMALL BUSINESS ADMINISTRATION**

**[Disaster Declaration #15226 and #15227; NEBRASKA Disaster Number NE-00069]**

**Presidential Declaration Amendment of a Major Disaster for Public Assistance Only for the State of Nebraska**

**AGENCY:** U.S. Small Business Administration.

**ACTION:** Amendment 1.

**SUMMARY:** This is an amendment of the Presidential declaration of a major disaster for Public Assistance Only for the State of NEBRASKA (FEMA-4325-DR), dated 08/01/2017.

*Incident:* Severe Storms, Tornadoes, and Straight-line Winds.

*Incident Period:* 06/12/2017 through 06/17/2017.

**DATES:** Issued on 08/01/2017.

*Physical Loan Application Deadline Date:* 10/02/2017.

*Economic Injury (EIDL) Loan Application Deadline Date:* 05/01/2018.

**ADDRESSES:** Submit completed loan applications to: U.S. Small Business Administration, Processing And Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

**FOR FURTHER INFORMATION CONTACT:** A Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416, (202) 205-6734.

**SUPPLEMENTARY INFORMATION:** The notice of the President's major disaster declaration for Private Non-Profit organizations in the State of NEBRASKA, dated 08/01/2017, is hereby amended to include the following areas as adversely affected by the disaster.

Primary Counties: Platte

All other information in the original declaration remains unchanged.

(Catalog of Federal Domestic Assistance Number 59008)

**James E. Rivera,**  
*Associate Administrator for Disaster Assistance.*

[FR Doc. 2017-18130 Filed 8-25-17; 8:45 am]

**BILLING CODE 8025-01-P**

<sup>22</sup> *Id.*

<sup>23</sup> 15 U.S.C. 78s(b)(3)(A).

<sup>24</sup> 17 CFR 240.19b-4.

<sup>25</sup> 17 CFR 200.30-3(a)(12).

**DEPARTMENT OF STATE****[Public Notice: 10087]****30-Day Notice of Proposed Information Collection: NEA/AC Performance Reporting System (ACPRS) and State Assistance Management System (SAMS) Domestic Results Monitoring Module****ACTION:** Notice of request for public comment and submission to OMB of proposed collection of information.**SUMMARY:** The Department of State has submitted the information collection described below to the Office of Management and Budget (OMB) for approval. In accordance with the Paperwork Reduction Act of 1995 we are requesting comments on this collection from all interested individuals and organizations. The purpose of this Notice is to allow 30 days for public comment.**DATES:** Submit comments directly to the Office of Management and Budget (OMB) up to September 27, 2017.**ADDRESSES:** Direct comments to the Department of State Desk Officer in the Office of Information and Regulatory Affairs at the Office of Management and Budget (OMB). You may submit comments by the following methods:

- *Email:* [oira\\_submission@omb.eop.gov](mailto:oira_submission@omb.eop.gov). You must include the DS form number, information collection title, and the OMB control number in the subject line of your message.

- *Fax:* 202-395-5806. Attention: Desk Officer for Department of State.

**FOR FURTHER INFORMATION CONTACT:** Direct requests for additional information regarding the collection listed in this notice, including requests for copies of the proposed collection instrument and supporting documents, may be made to Hainer Sibrian, TetraTech/PRO-telligent Contractor, U.S. Department of State, Bureau of Near Eastern Affairs, Office of Assistance Coordination (NEA/AC), NEA Mail Room—Room 6528, 2201 C St. NW., Washington, DC 20520. He may be reached by phone at 202-776-8826 or by email at [SibrianHE@state.gov](mailto:SibrianHE@state.gov).**SUPPLEMENTARY INFORMATION:**

- *Title of Information Collection:* NEA/AC Performance Reporting System (ACPRS); and State Assistance Management System (SAMS) Domestic.

- *OMB Control Number:* 1405-0183.
- *Type of Request:* Extension of a Currently Approved Collection.

- *Originating Office:* Bureau of Near Eastern Affairs, Office of Assistance Coordination (NEA/AC).

- *Form Number:* DS-4127.

- *Respondents:* Recipients of NEA/AC grants.
  - *Estimated Number of Respondents:* 240.
  - *Estimated Number of Responses:* 960.
  - *Average Time per Response:* 20 minutes.
  - *Total Estimated Burden Time:* 19,200 hours.
  - *Frequency:* Quarterly.
  - *Obligation to Respond:* Mandatory.
- We are soliciting public comments to permit the Department to:
- Evaluate whether the proposed information collection is necessary for the proper functions of the Department.
  - Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used.
  - Enhance the quality, utility, and clarity of the information to be collected.
  - Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this Notice are public record. Before including any detailed personal information, you should be aware that your comments as submitted, including your personal information, will be available for public review.

**Abstract of Proposed Collection**

The Assistance Coordination (AC) Office, established in June 2014, coordinates United States government foreign assistance in the Middle East and North Africa region for the Department of State, and manages the implementation of all the assistance functions within the Department of State's Bureau of Near Eastern Affairs. In fiscal year 2017, the AC office expects to obligate over \$142 million to support economic development, good governance, education, democracy programs, and human rights reform in 20 countries of the Middle East and North Africa. As a normal course of business and in compliance with OMB Guidelines contained in 2 CFR 200, recipient organizations are required to provide, and the U.S. Department of State is required to collect, periodic program and financial performance reports. The responsibility of the Department to track and monitor the programmatic and financial performance necessitates a database that can help facilitate this in a consistent and standardized manner. The NEA/AC Performance Reporting System (ACPRS) enables enhanced monitoring and

evaluation of grants through standardized collection and storage of relevant award elements, such as quarterly progress reports, workplans, results monitoring plans, grant agreements, and other business information related to AC implementers. The ACPRS streamlines communication with implementers and allows for rapid identification of information gaps for specific projects. With the introduction of a results monitoring module within SAMS Domestic in April 2018, NEA/AC will exclusively use SAMS Domestic to track and monitor programmatic and financial performance of awards and phase out ACPRS.

**Methodology**

Information will be electronically entered into ACPRS, and later SAMS Domestic, by respondents.

**Gregory Young,**

*Grants Manager, Bureau of Near Eastern Affairs, Office of Assistance Coordination (NEA/AC) Department of State.*

[FR Doc. 2017-18194 Filed 8-25-17; 8:45 am]

BILLING CODE 4710-31-P

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****Agency Information Collection Activities: Requests for Comments; Clearance of Renewed Approval of Information Collection: Office of Dispute Resolution Procedures for Protests and Contact Disputes****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Notice and request for comments.**SUMMARY:** In accordance with the Paperwork Reduction Act of 1995, FAA invites public comments about our intention to request the Office of Management and Budget (OMB) approval to renew a previously approved information collection. The regulations seek factual and legal information from protesters or claimants primarily through written submissions.**DATES:** Written comments should be submitted by September 27, 2017.**ADDRESSES:** Interested persons are invited to submit written comments on the proposed information collection to the Office of Information and Regulatory Affairs, Office of Management and Budget. Comments should be addressed to the attention of the Desk Officer, Department of Transportation/FAA, and sent via electronic mail to [oira\\_submission@omb.eop.gov](mailto:oira_submission@omb.eop.gov), or faxed to

(202) 395-6974, or mailed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW., Washington, DC 20503.

*Public Comments Invited:* You are asked to comment on any aspect of this information collection, including (a) Whether the proposed collection of information is necessary for FAA's performance; (b) the accuracy of the estimated burden; (c) ways for FAA to enhance the quality, utility and clarity of the information collection; and (d) ways that the burden could be minimized without reducing the quality of the collected information. The agency will summarize and/or include your comments in the request for OMB's clearance of this information collection.

**FOR FURTHER INFORMATION CONTACT:**

Barbara Hall at [Barbara.L.Hall@faa.gov](mailto:Barbara.L.Hall@faa.gov) or (817) 222-5448.

**SUPPLEMENTARY INFORMATION:**

*OMB Control Number:* 2120-0632.

*Title:* Office of Dispute Resolution Procedures for Protests and Contact Disputes.

*Form Numbers:* There are no FAA forms associated with this collection.

*Type of Review:* Renewal of an information collection.

*Background:* The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on June 19, 2017 (82 FR 27950). There were no comments. 14 CFR 17.15 and 17.25 provide the procedures for filing protests and contract claims with the Office of Dispute Resolution for Acquisition. The regulations seek factual and legal information from protesters or claimants primarily through written submissions. The information sought by the regulations is used by the ODOT, as well as the opposing parties: (1) To gain a clear understanding as to the facts and the law underlying the dispute; and (2) to provide a basis for applying dispute resolution techniques.

*Respondents:* Approximately 45 protestors or claimants.

*Frequency:* On occasion.

*Estimated Average Burden per Response:* 20.5 hours.

*Estimated Total Annual Burden:* 923 hours.

Issued in Washington, DC on August 21, 2017.

**Ronda L Thompson,**

*FAA Information Collection Clearance Officer, Performance, Policy & Records Management Branch, ASP-110.*

[FR Doc. 2017-18011 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-13-P**

**DEPARTMENT OF TRANSPORTATION**

**Federal Highway Administration**

[Docket No. FHWA-2017-0036]

**Agency Information Collection**

**Activities: Request for Comments for a New Information Collection**

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice and request for comments.

**SUMMARY:** The FHWA has forwarded the information collection request described in this notice to the Office of Management and Budget (OMB) for approval of a new information collection. We published a Federal Register Notice with a 60-day public comment period on this information collection on May 30, 2017. We are required to publish this notice in the **Federal Register** by the Paperwork Reduction Act of 1995.

**DATES:** Please submit comments by September 27, 2017.

**ADDRESSES:** You may send comments within 30 days to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, Attention DOT Desk Officer. You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for the FHWA's performance; (2) the accuracy of the estimated burden; (3) ways for the FHWA to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized, including the use of electronic technology, without reducing the quality of the collected information. All comments should include the Docket number FHWA-2017-0036.

**FOR FURTHER INFORMATION CONTACT:**

Victoria Peters, 720-963-3522, or Andy Byra, 720-963-3550, Office of Innovative Program Delivery, Center for Local-Aid Support, Federal Highway Administration, Department of Transportation, 1200 New Jersey Avenue SE., Washington, DC 20590. Office hours are from 8 a.m. to 5 p.m., Monday through Friday, except Federal holidays.

**SUPPLEMENTARY INFORMATION:**

*Title:* *Local Public Agencies Training and Technical Assistance Needs Assessment Background:* The Federal Highway Administration (FHWA) is charged with implementing a local technical assistance program under 23 U.S.C. 504 (b). Congress recognized that training and technical assistance to the

local public agencies (LPA) to provide access to surface transportation technology, technical assistance and training was necessary and created the Rural Technical Assistance Program (RTAP) in 1982. In 1991, through the Intermodal Surface Transportation Efficiency Act (ISTEA) legislation, this program became the Local Technical Assistance Program (LTAP). There is an LTAP Center in every State and PR/USVI—51 total. The program has launched a strategic planning process and a lack of data directly linking training to improvements in program delivery and innovation deployment outcomes posed a challenge to the Agency.

A needs assessment survey will help inform and identify what areas of knowledge that training needs to accomplish within the local agency community. The results of the assessment will help direct resources to the areas of greatest demand. The survey will be conducted once over a 30 day period. These are surveys to collect training related information and there are no sensitive or personal questions, therefore confidentiality is not guaranteed or necessary.

*Respondents:* Local Public Agency Public Works Directors and Road Superintendents.

*Frequency:* This is a one-time collection.

*Estimated Average Burden per Response:* Approximately 7,800 responses who will each require an average of 15 minutes to respond.

*Estimated Total Annual Burden Hours:* The total annual public burden hours for this information collection is estimated to be 1,950 hours.

**Authority:** The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; and 49 CFR 1.48.

Issued on: August 22, 2017.

**Michael Howell,**

*Information Collection Officer.*

[FR Doc. 2017-18171 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-22-P**

**DEPARTMENT OF TRANSPORTATION**

**Federal Highway Administration**

**Notice of Final Federal Agency Actions on Proposed Highway in California**

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice of Limitation on Claims for Judicial Review of Actions by the California Department of Transportation (Caltrans).

**SUMMARY:** The FHWA, on behalf of Caltrans, is issuing this notice to announce actions taken by Caltrans. The actions relate to the proposed improvement of Avenue R from the Sierra Highway to just east of 25th Street East within the City of Palmdale in the County of Los Angeles, State of California. Those actions grant licenses, permits, and approvals for the project.

**DATES:** By this notice, the FHWA, on behalf of Caltrans, is advising the public of final agency actions subject to 23 U.S.C. 139(I)(1). A claim seeking judicial review of the Federal agency actions on the highway project will be barred unless the claim is filed on or before January 25, 2018. If the Federal law that authorizes judicial review of a claim provides a time period of less than 150 days for filing such claim, then that shorter time period still applies.

**FOR FURTHER INFORMATION CONTACT:** For Caltrans: Quint Chemnitz, Associate Environmental Planner, Environmental Planning Division, California Department of Transportation—District 7, 100 South Main Street, Los Angeles, California, 8 a.m. to 5 p.m., (213) 897-2863, [quint.chemnitz@dot.ca.gov](mailto:quint.chemnitz@dot.ca.gov).

**SUPPLEMENTARY INFORMATION:** Effective July 1, 2007, the Federal Highway Administration (FHWA) assigned, and the California Department of Transportation (Caltrans) assumed, environmental responsibilities for this project pursuant to 23 U.S.C. 327. Notice is hereby given that Caltrans has taken final agency actions subject to 23 U.S.C. 139(I)(1) by issuing licenses, permits, and approvals for the following Avenue R Complete Street and Safe Routes Project in the State of California: The project proposes to provide a safer corridor along Avenue R for local students by providing a two-way left-turn lane; providing dedicated Class II bike lanes; closing sidewalk gaps; and providing bus turnouts along the project reach. Improvements will be made on Avenue R from just west of Sierra Highway to just east of 25th Street East. The Federal Project Identification Number associated with the project is ATPL-5378(038). The actions by the Federal agencies, and the laws under which such actions were taken, are described in the Environmental Assessment (EA) with a Finding of No Significant Impact (FONSI) for the project, approved on May 1, 2017, and in other documents in the project records. The EA/FONSI, and other project records are available by contacting Caltrans at the addresses provided above. The EA/FONSI can be viewed and downloaded from the project Web site at <http://>

[www.dot.ca.gov/d7/env-docs/](http://www.dot.ca.gov/d7/env-docs/), or viewed at public libraries in the project area. This notice applies to all Federal agency decisions as of the issuance date of this notice and all laws under which such actions were taken, including but not limited to:

1. Council on Environmental Quality Regulations;
2. National Environmental Policy Act;
3. Fixing America's Surface Transportation Act (FAST Act);
4. Department of Transportation Act of 1966;
5. Federal Aid Highway Act of 1970;
6. Clean Air Act Amendments of 1990;
7. Noise Control Act of 1970;
8. 23 CFR part 772 FHWA Noise Standards, Policies and Procedures;
9. Department of Transportation Act of 1966, Section 4(f);
10. Clean Water Act of 1977 and 1987;
11. Endangered Species Act of 1973;
12. Migratory Bird Treaty Act;
13. National Historic Preservation Act of 1966, as amended;
14. Historic Sites Act of 1935 and
15. Executive Order 13112, Invasive Species.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

**Authority:** 23 U.S.C. 139(I)(1)

**Tasha J. Clemons,**

*Director, Program Development, Federal Highway Administration, Sacramento, California.*

[FR Doc. 2017-18170 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-RY-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2017-0226]

#### Fixing America's Surface Transportation Act Correlation Study

**AGENCY:** Federal Motor Carrier Safety Administration (FMCSA), DOT.

**ACTION:** Notice; request for comments.

**SUMMARY:** On June 27, 2017, the National Academy of Sciences (NAS) published its report titled, "Improving Motor Carrier Safety Measurement." This report was commissioned by FMCSA consistent with the requirements of Section 5221 of the Fixing America's Surface Transportation (FAST) Act. The FAST Act also requires that the Agency develop an action plan

to address any identified deficiencies and submit it to Congress and the U.S. Department of Transportation's (DOT) Office of Inspector General (OIG). The purpose of this notice is to announce a public meeting to discuss the NAS recommendations and to solicit input to be considered by the Agency in the development and implementation of the action plan.

**DATES:** The public meeting will take place on Friday, September 8, 2017, from 1:00 p.m. to 4:00 p.m., Eastern Time. A copy of the agenda for the meeting will be available in advance of the meeting at [https://www.regonline.com/FMCSA\\_Correlation\\_Study\\_Action\\_PlanPublicMeeting](https://www.regonline.com/FMCSA_Correlation_Study_Action_PlanPublicMeeting). If all interested participants have had an opportunity to comment, the meeting may conclude early.

**Public Comments:** Comments must be received by September 27, 2017.

**ADDRESSES:** The meeting will be held at the FMCSA National Training Center, 1310 N. Courthouse Road, Suite 600, Arlington, VA 22201-2508. Those interested in attending this public meeting must register at: [https://www.regonline.com/FMCSA\\_Correlation\\_Study\\_Action\\_PlanPublicMeeting](https://www.regonline.com/FMCSA_Correlation_Study_Action_PlanPublicMeeting). Participants have the option of registering to attend in person, or via webinar.

You may submit comments identified by Docket Number FMCSA-2017-0226 using any of the following methods:

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- **Mail:** Docket Management Facility, U.S. Department of Transportation, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590-0001.

- **Hand Delivery or Courier:** West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m. E.T., Monday through Friday, except Federal holidays.

- **Fax:** 1-202-493-2251.

**FOR FURTHER INFORMATION CONTACT:** For information about the public meeting or for information on facilities or services for individuals with disabilities or to request special assistance at the meeting, contact Ms. Sharon Worthy, Director of External Affairs at (202) 366-2309 or by email at [Sharon.Worthy@dot.gov](mailto:Sharon.Worthy@dot.gov), by September 1, 2017.

For information about the Correlation Study, please contact Ms. Theresa Rowlett, Senior Policy Advisor, Office of Enforcement, FMCSA, 1200 New Jersey Avenue SE., Washington, DC

20590, Telephone (202) 360–2924 or by email at [Theresa.Rowlett@dot.gov](mailto:Theresa.Rowlett@dot.gov).

If you have questions regarding viewing or submitting material to the docket, contact Docket Services, telephone (202) 366–9826.

#### **SUPPLEMENTARY INFORMATION:**

##### **Submitting Comments**

If you submit a comment, please include the docket number for this notice (FMCSA–2017–0226), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov>, put the docket number, FMCSA–2017–0226, in the keyword box, and click “Search.” When the new screen appears, click on the “Comment Now!” button and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the facility, please enclose a stamped, self-addressed postcard or envelope.

##### **Viewing Comments and Documents**

To view comments, as well as any documents mentioned in this preamble as being available in the docket, to <http://www.regulations.gov>. Insert the docket number, FMCSA–2017–0226, in the keyword box, and click “Search.” Next, click the “Open Docket Folder” button and choose the document to review. If you do not have access to the Internet, you may view the docket by visiting the Docket Management Facility in Room W12–140 on the ground floor of the West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., E.T., Monday through Friday, except Federal holidays.

##### **Privacy Act**

The Department of Transportation (DOT) solicits comments from the public to better inform its decision-

making processes. DOT posts these comments, without edit, including any personal information the commenter provides, to [www.regulations.gov](http://www.regulations.gov), as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at [www.dot.gov/privacy](http://www.dot.gov/privacy).

##### **Background**

Section 5221 of the FAST Act, titled “Correlation Study,” required FMCSA to commission the National Research Council of the National Academies to conduct a study of FMCSA’s Compliance, Safety, Accountability (CSA) program and Safety Measurement System (SMS). SMS is FMCSA’s algorithm for identifying patterns of non-compliance and prioritizing motor carriers for interventions. FMCSA is prohibited from publishing SMS percentiles and alerts on the SMS Web site for motor carriers transporting property until the NAS Correlation Study is complete and all reporting and certification requirements under the FAST Act are satisfied.

The FAST Act also required FMCSA to submit the results of this study to both Congress and the DOT OIG. In addition, within 120 days of the submission of the report to Congress and the OIG, FMCSA must submit an action plan to the Senate Committee on Commerce, Science, and Transportation; and the House of Representatives Transportation and Infrastructure Committee. The OIG is required to review the action plan and submit a report to Congress on the responsiveness of the FMCSA’s plan to the NAS report’s recommendations.

Under Section 5221 of the FAST Act, the purpose of this study is to analyze:

- a. The accuracy with which the Behavior Analysis Safety Improvement Categories (BASICS) used by SMS:
  - i. Identify high risk carriers.
  - ii. Predict or are correlated with future crash risk, crash severity, or other safety indicators for motor carriers, including the highest risk carriers.
- b. The methodology used to calculate BASIC percentiles and identify carriers for enforcement, including the weights assigned to particular violations and the tie between crash risk and specific regulatory violations, with respect to accurately identifying and predicting future crash risk for motor carriers.

c. The relative value of inspection information and roadside enforcement data.

d. Any data collection gaps or data sufficiency problems that may exist and the impact of those gaps and problems on the efficacy of the CSA program.

e. The accuracy of safety data, including the use of crash data from

crashes in which a motor carrier was free from fault.

f. Whether BASIC percentiles for motor carriers of passengers should be calculated separately from for motor carriers of freight.

g. The differences in the rates at which safety violations are reported to FMCSA for inclusion in the SMS by various enforcement authorities, including States, territories, and Federal inspectors.

h. How members of the public use the SMS and what effect making the SMS information public has had on reducing crashes and eliminating unsafe motor carriers from the industry.

The FAST Act required the NAS also to consider:

a. Whether the SMS provides comparable precision and confidence, through SMS alerts and percentiles, for the relative crash risk of individual large and small motor carriers.

b. Whether alternatives to the SMS would identify high risk carriers more accurately.

c. The recommendations and findings of the Comptroller General of the United States and the Inspector General of the Department of Transportation, and independent review team reports, issued before the date of the FAST Act.

##### *NAS Report Recommendations and FMCSA Action Plan Overview*

On June 27, 2017, NAS published the report titled, “Improving Motor Carrier Safety Measurement.” The report is available at <https://www.nap.edu/catalog/24818/improving-motor-carrier-safety-measurement>. A copy of the report has been placed in the docket referenced at the beginning of this notice. In preparing the report, NAS collected and analyzed all the quantitative data available to FMCSA in its databases, which contain information on the safety of commercial motor carriers and drivers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. In addition, NAS held three public meetings to engage stakeholders from the truck and bus industry, safety advocates, researchers, and other government organizations. The meeting agendas are included in an appendix to the report.

The NAS report concluded that SMS, in its current form, is structured in a reasonable way and its method of identifying motor carriers for alert status is defensible. In addition, NAS agreed that FMCSA’s overall approach, based on crash prevention rather than prediction, is sound. NAS provided FMCSA with six recommendations to improve the system.

FMCSA accepts the NAS report's recommendations and outlines below several high-level proposals to address each recommendation. The proposals summarized below are intended to allow the public to provide input into the development of the action plan but do not themselves constitute the entirety of the action plan. FMCSA is still considering and evaluating actions to address the recommendations. FMCSA is also working with the NAS to establish a Standing Committee to oversee and provide advice relating to the Agency's work addressing these recommendations. In addition to reviewing and providing advice on the Agency's technical work, such as the Item Response Theory (IRT) modeling, NAS will advise on all recommendations, and establish a process for gathering stakeholder input in the implementation of the action plan as well.

**Recommendation 1**—FMCSA should develop the suggested IRT model over the next 2 years. If it is then demonstrated to perform well in identifying motor carriers for alerts, FMCSA should use it to replace SMS in a manner akin to the way SMS replaced SafeStat.

#### FMCSA Comment

To address this recommendation, FMCSA is securing additional expertise and resources to develop and test the proposed IRT statistical model. The testing of an IRT model is consistent with FMCSA's continuous improvement process of modifying and testing changes to SMS by focusing on data quality, data collection, and transparency. FMCSA will evaluate whether the new model performs well using existing effectiveness testing methods and/or methodologies recommended by the NAS, and based on that evaluation will determine the next steps in using that model.

FMCSA is seeking comments on the implementation of an IRT model and its application to the SMS as well as the process for development and testing of the model.

**Recommendation 2**—FMCSA should continue to collaborate with states and other agencies to improve the quality of the Motor Carrier Management Information System (MCMIS) data in support of SMS, focusing on carrier exposure and crash data. The current exposure data are missing with high frequency, and data that are collected are likely of unsatisfactory quality. To improve the exposure data collected involves not only collecting higher-quality Vehicle Miles Traveled (VMT) data, but also collecting this information

by state and by month. This will enable SMS to (partially) accommodate existing heterogeneity in the environments where carriers travel. Crash data are also missing too often. Also, there is information available from police reports currently not represented on MCMIS that could be helpful in understanding the contributing factors in a crash. Such information could help to validate the assumptions linking violations to crash frequency. To address these issues, FMCSA should support the states in collecting more complete crash data, and in universal adoption of the Model Minimum Uniform Crash Criteria (MMUCC), as well as developing and supplying the code needed to automatically extract the data needed for the MCMIS crash file.

#### FMCSA Comments on VMT

Regarding exposure data, the Agency agrees that more VMT data from motor carriers would reduce the need for FMCSA to use substitute values and would improve the quality of the data in SMS. FMCSA is concerned that access to monthly and by-State VMT is not currently feasible. Currently, FMCSA rules require carriers to provide updated VMT data only every two years. FMCSA previously considered using other sources of VMT data such as the International Registration Plan data. However, FMCSA does not currently have access to that data. And even if the Agency had access to IRP data, that would not provide a complete data set, as IRP carriers are not required to report information on vehicles with a gross vehicle weight rating of less than 26,000 pounds.

FMCSA seeks information, through this notice, on potential sources of improved VMT data. Additionally, FMCSA requests input from industry and other stakeholders about other available sources for this data and the costs and benefits of voluntary submission of the data.

FMCSA expects to consider the effect of monthly, voluntarily-submitted, State-by-State VMT data from motor carriers, and the impact on the system if this information were provided by only a portion of the regulated community.

#### FMCSA Comments on Crash Data

In accordance with Section 5306 of the FAST Act, FMCSA established a Federal Advisory Committee to review Post-Accident Reports for tow-away crashes involving FMCSA-regulated commercial motor vehicles. That committee was charged with recommending changes to improve the quality and consistency of Police

Accident Reports (PARs) data. More than half of the committee members represented States or State law enforcement officials, with the remainder representing industry, labor, safety advocates, and other interested parties. The FAST Act directed the working group to review existing State PARs to recommend best practices for the collection of PARs data by State and local law enforcement agencies. The Post Accident Review Advisory Committee recommended that all States use the National Highway Traffic Safety Administration's MMUCC<sup>i</sup> and that FMCSA modify its data systems to receive all MMUCC data from the States. In January 2017, FMCSA's and NHTSA's senior leadership agreed to establish a workgroup to carry out the Committee's recommendations.

FMCSA recognizes that implementation of this recommendation will take additional resources for the States for training and information technology system changes. We are partnering with NHTSA to encourage States to participate in a USDOT national crash repository (that uses the MMUCC guidance as a framework). In addition, FMCSA will be examining the quality of the EDT data and comparing it to what we receive in MCMIS.

As a result, FMCSA specifically asks for information on issues that should be considered FMCSA determines how to best integrate MMUCC data.

**Recommendation 3**—FMCSA should investigate ways of collecting data that will likely benefit the recommended methodology for safety assessment. This includes data on carrier characteristics—including information on driver turnover rate, type of cargo, method and level of compensation, and better information on exposure.

#### FMCSA Comments

The Agency agrees that additional information about carrier operations might improve the Agency's analysis and identification of non-compliant motor carriers. To confirm this, FMCSA will use the IRT model and simulate the impacts and value of driver turnover rates, type of cargo, method and level of compensation, and exposure in identifying unsafe motor carriers before proceeding with an information collection. In addition, FMCSA would conduct a cost benefit analysis to determine how much it would cost the industry to provide the Agency with this additional information. Through this notice, FMCSA is specifically

<sup>i</sup> <https://www.transportation.gov/government/traffic-records/model-minimum-uniform-crash-criteria-mmucc-0>.

seeking input on these and other data fields to be considered and information on the costs associated with submitting this information.

**Recommendation 4**—FMCSA should structure a user-friendly version of the MCMIS data file used as input to SMS without any personally identifiable information to facilitate its use by external parties, such as researchers, and by carriers. In addition, FMCSA should make user-friendly computer code used to compute SMS elements available to individuals in accordance with reproducibility and transparency guidelines.

#### FMCSA Comments

FMCSA agrees that there could be benefits from making MCMIS data available to researchers and carriers. Through this **Federal Register** notice, FMCSA seeks input on how the MCMIS data would be used by researchers and others to determine the best method(s) for providing the data file.

The Agency is considering developing the programming, screen shots, and preview capacity so that changes from one month to another are explained to motor carriers to help carriers understand the implications of violations and crashes on their SMS data. Input on the information that would be helpful in reviewing SMS data is requested through this notice.

**Recommendation 5**—FMCSA should undertake a study to better understand the statistical operating characteristics of the percentile ranks to support decisions regarding the usability of public scores.

#### FMCSA Comments

Like NAS, FMCSA has been unable to quantify the impacts to motor carriers of publicly displaying the SMS percentiles. The Agency has only anecdotal information about the business impacts of the public percentiles on the SMS Web site. Historically, insurance companies and shippers have been reluctant to share data on how safety data is used to determine rates. And, while the Agency has been contacted by companies advising that they lost business because of SMS, these claims have not been validated or assimilated into a usable analysis.

Through this notice, FMCSA seeks data from motor carriers, insurance companies, and shippers regarding the impacts of the public display of SMS percentiles and alerts on businesses. This information will be used to identify next steps for this recommendation.

**Recommendation 6**—Given that there are good reasons for both an absolute and a relative metric on safety performance, FMCSA should decide on the carriers that receive SMS alerts using both the SMS percentile ranks and the SMS measures, and the percentile ranks should be computed both conditionally within safety event groups and over all motor carriers.

#### FMCSA Comments

The Agency has heard from motor carriers with increased measures or percentiles due to an increase in vehicles or clean inspections. Analysis of the number of carriers that received higher measures and percentiles without a violation or crash indicates this happens to a very small number of carriers. However, FMCSA agrees that the methodology should be revised so that a safety event that is not a violation or a crash is not the sole reason for an increased measure or percentile.

In addition, FMCSA anticipates investigating the use of a hybrid measure that combines relative and absolute metrics as part of its development of the IRT model. FMCSA seeks comment from stakeholders on this issue, how it could be implemented, and when such changes would be appropriate.

Issued under the authority delegated in 49 CFR 1.87 on: August 21, 2017.

**John Van Steenburg,**

*Assistant Administrator/Chief Safety Officer.*

[FR Doc. 2017-18183 Filed 8-25-17; 8:45 am]

**BILLING CODE 4910-EX-P**

## DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900-0606]

### Agency Information Collection

#### Activity: Regulation for Submission of Evidence

**AGENCY:** Veterans Health Administration, Department of Veterans Affairs.

**ACTION:** Notice.

**SUMMARY:** Veterans Health Administration, Department of Veterans Affairs (VA), is announcing an opportunity for public comment on the proposed collection of certain information by the agency. Under the Paperwork Reduction Act (PRA) of 1995, Federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of a currently approved

collection, and allow 60 days for public comment in response to the notice.

**DATES:** Written comments and recommendations on the proposed collection of information should be received on or before October 27, 2017.

**ADDRESSES:** Submit written comments on the collection of information through Federal Docket Management System (FDMS) at [www.Regulations.gov](http://www.Regulations.gov) or to Brian McCarthy, Veterans Health Administration, Office of Regulatory and Administrative Affairs (10B4), Department of Veterans Affairs, 810 Vermont Avenue NW., Washington, DC 20420 or email to [Brian.McCarthy4@va.gov](mailto:Brian.McCarthy4@va.gov). Please refer to “OMB Control No. 2900-0606” in any correspondence. During the comment period, comments may be viewed online through FDMS.

#### FOR FURTHER INFORMATION CONTACT:

Brian McCarthy at (202) 461-6345.

**SUPPLEMENTARY INFORMATION:** Under the PRA of 1995, Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. This request for comment is being made pursuant to Section 3506(c)(2)(A) of the PRA.

With respect to the following collection of information, VHA invites comments on: (1) Whether the proposed collection of information is necessary for the proper performance of VHA's functions, including whether the information will have practical utility; (2) the accuracy of VHA's estimate of the burden of the proposed collection of information; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or the use of other forms of information technology.

*Authority:* U.S. Code: 38 U.S.C. 1729.

*Title:* Regulation for Submission of Evidence—Title 38 CFR 17.101(a)(4).

*OMB Control Number:* 2900-0606.

*Type of Review:* Renewal of a currently approved collection.

*Abstract:* Under the provisions of 38 CFR, Section 17.101(a)(4), entitled “Amount of Recovery or Collection—Third Party Liability”, a third-party payer that is liable for reimbursing VA for health care VA provided to Veterans with non-service-connected conditions continues to have the option of paying either the billed charges as described in Section 17.101 or the amount the health plan demonstrates it would pay to providers other than entities of the United States for the same care or services in the same geographic area. If

the amount submitted for payment is less than the amount billed, VA will accept the submission as payment, subject to verification at VA's discretion. A VA employee having responsibility for collection of such charges may request that the third party payer submit evidence or information to substantiate the appropriateness of the payment amount (e.g., health plan policies, provider agreements, medical evidence, proof of payment to other providers demonstrating the amount paid for the same care and services VA provided). This information would be needed to determine whether the third-party payer has met the test of properly demonstrating its equivalent private sector provider payment amount for the same care or services and within the same geographic area as provided by VA. This form provides for requesting patient medical records, health plan policies, provider agreements and any type or records that provide evidence of medical services and proof of payments made to others for the same medical care and services.

If VA accepts the submitted payment that is less than the billed charges, the third party payer can be subject to rate verification. In the event that rate verification is conducted, the results can be used to negotiate better rates, recoup underpayments, or amend agreements. Absent a third party payer agreement, VA should also be reimbursed billed charges or the amount third party payers would pay to non-government entities.

*Affected Public:* Individuals and households.

*Estimated Annual Burden:* 800 hours.

*Estimated Average Burden per Respondent:* 120 minutes.

*Frequency of Response:* Annually.

*Estimated Number of Respondents:* 400.

By direction of the Secretary.

**Cynthia Harvey-Pryor,**

*Department Clearance Officer Office of Quality and Compliance, Department of Veterans Affairs.*

[FR Doc. 2017-18158 Filed 8-25-17; 8:45 am]

**BILLING CODE 8320-01-P**

## DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900-0219]

### Agency Information Collection Activity: CHAMP VA Benefits—Application, Claim, Other Health Insurance & Potential Liability

**AGENCY:** Veterans Health Administration, Department of Veterans Affairs.

**ACTION:** Notice.

**SUMMARY:** Veterans Health Administration, Department of Veterans Affairs (VA), is announcing an opportunity for public comment on the proposed collection of certain information by the agency. Under the Paperwork Reduction Act (PRA) of 1995, Federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed revision of a currently approved collection, and allow 60 days for public comment in response to the notice.

**DATES:** Written comments and recommendations on the proposed collection of information should be received on or before October 27, 2017.

**ADDRESSES:** Submit written comments on the collection of information through Federal Docket Management System (FDMS) at [www.Regulations.gov](http://www.Regulations.gov) or to Brian McCarthy, Veterans Health Administration, Office of Regulatory and Administrative Affairs (10B4), Department of Veterans Affairs, 810 Vermont Avenue NW., Washington, DC 20420 or email to [Brian.McCarthy4@va.gov](mailto:Brian.McCarthy4@va.gov). Please refer to "OMB Control No. 2900-0219" in any correspondence. During the comment period, comments may be viewed online through FDMS.

**FOR FURTHER INFORMATION CONTACT:** Brian McCarthy at (202) 461-6345.

#### SUPPLEMENTARY INFORMATION:

Under the PRA of 1995, Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. This request for comment is being made pursuant to Section 3506(c)(2)(A) of the PRA.

With respect to the following collection of information, VHA invites comments on: (1) Whether the proposed collection of information is necessary for the proper performance of VHA's functions, including whether the information will have practical utility; (2) the accuracy of VHA's estimate of the burden of the proposed collection of information; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or the use of other forms of information technology.

*Authority:* 38 U.S.C. Sections 501 and 1781, 10 U.S.C. Sections 1079 and 1086, 42 U.S.C. Sections 2651, 2652 and 2653.

*Title:* CHAMP VA Benefits—Application, Claim, Other Health Insurance & Potential Liability.

*OMB Control Number:* 2900-0219.

*Type of Review:* Revision of a currently approved collection. Titles:

1. VA Form 10-10d, Application for CHAMPVA Benefits
2. VA Form 10-7959a, CHAMPVA Claim Form
3. VA Form 10-7959c, CHAMPVA Other Health Insurance (OHI) Certification
4. VA Form 10-7959d, CHAMPVA Potential Liability Claim
5. VA Form 10-7959e, VA Claim for Miscellaneous Expenses
6. Payment (beneficially claims)
7. Review and Appeal Process
8. Clinical Review

*OMB Control Number:* 2900-0219.

*Type of Review:* Revision of a currently approved collection.

#### Abstracts:

1. VA Form 10-10d, Application for CHAMPVA Benefits, is used to determine eligibility of persons applying for healthcare benefits under the CHAMPVA program in accordance with 38 U.S.C. Sections 501 and 1781.

2. VA Form 10-7959a, CHAMPVA Claim Form, is used to adjudicate claims for CHAMPVA benefits in accordance with 38 U.S.C. Sections 501 and 1781, and 10 U.S.C. Sections 1079 and 1086. This information is required for accurate adjudication and processing of beneficiary submitted claims. The claim form is also instrumental in the detection and prosecution of fraud. In addition, the claim form is the only mechanism to obtain, on an interim basis, other health insurance (OHI) information.

3. Except for Medicaid and health insurance policies that are purchased exclusively for the purpose of supplementing CHAMPVA benefits, CHAMPVA is always the secondary payer of healthcare benefits (38 U.S.C. Sections 501 and 1781, and 10 U.S.C. Section 1086). VA Form 10-7959c, CHAMPVA—Other Health Insurance (OHI) Certification, is used to systematically obtain OHI information and to correctly coordinate benefits among all liable parties.

4. The Federal Medical Care Recovery Act (42 U.S.C. 2651-2653), mandates recovery of costs associated with healthcare services related to an injury/illness caused by a third party. VA Form 10-7959d, CHAMPVA Potential Liability Claim, provides basic information from which potential liability can be assessed. Additional authority includes 38 U.S.C. Section 501; 38 CFR 1.900 *et seq.*; 10 U.S.C. Sections 1079 and 1086; 42 U.S.C. Sections 2651-2653; and Executive Order 9397.

5. VA Form 10-7959e, VA Claim for Miscellaneous Expenses, information collection is needed to carry out the health care programs for certain children of Korea and/or Vietnam veterans authorized under 38

U.S.C., chapter 18, as amended by section 401, Public Law 106-419 and section 102, Public Law 108-183. VA's medical regulations 38 CFR part 17 (17.900 through 17.905) establish regulations regarding provision of health care for certain children of Korea and Vietnam veterans and women Vietnam veterans' children born with spina bifida and certain other covered birth defects. These regulations also specify the information to be included in requests for preauthorization and claims from approved health care providers.

6. Payment of Claims for Provision of Health Care for Certain Children of Korea and/or Vietnam Veterans (includes provider billing and VA Forms 10-7959e). This data collection is for the purpose of claiming payment/reimbursement of expenses related to spina bifida and certain covered birth defects. Beneficiaries utilize VA Form 10-7959e, VA Claim for Miscellaneous Expenses. Providers utilize provider generated billing statements and standard billing forms such as: Uniform Billing-Forms UB-04, and CMS 1500, Medicare Health Insurance Claims Form. VA would be unable to determine the correct amount to reimburse providers for their services or beneficiaries for covered expenses without the requested information. The information is instrumental in the timely and accurate processing of provider and beneficiary claims for reimbursement. The frequency of submissions is not determined by VA, but will be determined by the provider or claimant and will be based on the volume of medical services and supplies provided to patients and claims for reimbursement are submitted individually or in batches.

7. Review and Appeal Process Regarding Provision of Health Care or Payment Relating to Provision of Health Care for Certain Children of Korea and/or Vietnam Veterans. The provisions of 38 CFR 17.904 establish a review process regarding disagreements by an eligible veteran's child or representative with a determination concerning provision of health care or a health care provider's disagreement with a determination regarding payment. The person or entity requesting reconsideration of such determination is required to submit such a request to the Chief Business Office Purchased Care (CBOPC) (Attention: Chief, Customer Service), in writing within one year of the date of initial determination. The request must state why the decision is in error and include any new and relevant information not previously considered. After reviewing the matter, a Customer Service Advisor issues a written determination to the person or entity seeking reconsideration. If such person or entity remains dissatisfied with the determination, the person or entity is permitted to submit

within 90 days of the date of the decision a written request for review by the Director, CBOPC.

*Affected Public:* Individuals or households.

*Estimated Annual Burden:*

1. VA Form 10-10d—7,000 hours.
2. VA Form 10-7959a—13,500 hours.
3. VA Form 10-7959c—16,666 hours.
4. VA Form 10-7959d—467 hours.
5. VA Form 10-7959e—1,350 hours.
6. Payment (beneficially claims)—183 hours.
7. Review and Appeal Process—6,577 hours.

8. Clinical Review—433 hours.

*Estimated Average Burden per Respondent:*

1. VA Form 10-10d—10 minutes.
2. VA Form 10-7959a—10 minutes.
3. VA Form 10-7959c—10 minutes.
4. VA Form 10-7959d—7 minutes.
5. VA Form 10-7959e—15 minutes.
6. Payment (beneficially claims)—10 minutes.
7. Review and Appeal Process—30 minutes.
8. Clinical Review—20 minutes.

*Frequency of Response:* Annually.

*Estimated Annual Responses:*

1. VA Form 10-10d—42,000.
2. VA Form 10-7959a—81,000.
3. VA Form 10-7959c—100,000.
4. VA Form 10-7959d—4,000.
5. VA Form 10-7959e—5,400.
6. Payment (beneficially claims)—1,100.
7. Review and Appeal Process—13,154.
8. Clinical Review—1,300.

By direction of the Secretary:

**Cynthia Harvey-Pryor,**

*Department Clearance Officer, Office of Quality and Compliance, Department of Veterans Affairs.*

[FR Doc. 2017-18159 Filed 8-25-17; 8:45 am]

**BILLING CODE 8320-01-P**

## DEPARTMENT OF VETERANS AFFAIRS

### Geriatrics and Gerontology Advisory Committee; Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act that a meeting of the Geriatrics and Gerontology

Advisory Committee will be held on October 23-24, 2017 at the Department of Veterans Affairs, 810 Vermont Avenue NW., Washington, DC. On October 23rd, the session will be held in Room 730 and begin at 1:00 p.m. and end at 5 p.m. On October 24th, the session will be held in Room 630 and begin at 8 a.m. and end at 4:30 p.m. This meeting is open to the public.

The purpose of the Committee is to provide advice to the Secretary of VA and the Under Secretary for Health on all matters pertaining to geriatrics and gerontology. The Committee assesses the capability of VA health care facilities and programs to meet the medical, psychological, and social needs of older Veterans and evaluates VA programs designated as Geriatric Research, Education, and Clinical Centers.

The meeting will feature presentations and discussions on VA's geriatrics and extended care programs, aging research activities, updates on VA's employee staff working in the area of geriatrics (to include training, recruitment and retention approaches), Veterans Health Administration (VHA) strategic planning activities in geriatrics and extended care, recent VHA efforts regarding dementia and program advances in palliative care, and performance and oversight of VA Geriatric Research, Education, and Clinical Centers.

No time will be allocated at this meeting for receiving oral presentations from the public. Interested parties should provide written comments for review by the Committee to Mrs. Alejandra Paulovich, Program Analyst, Geriatrics and Extended Care Services (10P4G), Department of Veterans Affairs, 810 Vermont Avenue NW., Washington, DC 20420, or via email at [Alejandra.Paulovich@va.gov](mailto:Alejandra.Paulovich@va.gov). Individuals who wish to attend the meeting should contact Mrs. Paulovich at (202) 461-6016.

Dated: August 23, 2017.

**LaTonya L. Small,**

*Federal Committee Management Officer.*

[FR Doc. 2017-18206 Filed 8-25-17; 8:45 am]

**BILLING CODE 8320-01-P**



# FEDERAL REGISTER

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Part II

## Environmental Protection Agency

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40 CFR Part 136

Clean Water Act Methods Update Rule for the Analysis of Effluent; Final Rule

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 136**

[EPA-HQ-OW-2014-0797; FRL-9957-24-OW]

RIN 2040-AF48

**Clean Water Act Methods Update Rule for the Analysis of Effluent**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This rule modifies the testing procedures approved for analysis and sampling under the Clean Water Act. The changes adopted in this final rule fall into the following categories: New and revised EPA methods (including new and/or revised methods published by voluntary consensus standard bodies (VCSB), such as ASTM International and the Standard Methods Committee); updated versions of currently approved methods; methods reviewed under the alternate test procedures (ATP) program; clarifications to the procedures for EPA approval of nationwide and limited use ATPs; and amendments to the procedure for determination of the method detection limit to address laboratory contamination and to better account for intra-laboratory variability. **DATES:** This regulation is effective on September 27, 2017. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of

September 27, 2017. For judicial review purposes, this final rule is promulgated as of 1:00 p.m. (Eastern time) on September 12, 2017 as provided at 40 CFR 23.2 and 23.7.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-HQ-OW-2014-0797. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other materials, such as copyrighted material are not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Water Docket in EPA Docket Center, EPA/DC, EPA West William J. Clinton Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is 202-566-1744 and the telephone number for the Water Docket is 202-566-2426.

**FOR FURTHER INFORMATION CONTACT:** Adrian Hanley, Engineering and Analysis Division (4303T), Office of Water, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460-0001; telephone:

202-564-1564; email: [hanley.adrian@epa.gov](mailto:hanley.adrian@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**A. General Information**

*1. Does this Action apply to me?*

EPA proposed the changes in this method update rule for public comment on February 19, 2015 (80 FR 8956).

EPA Regions, as well as States, Territories and Tribes authorized to implement the National Pollutant Discharge Elimination System (NPDES) program, issue permits with conditions designed to ensure compliance with the technology-based and water quality-based requirements of the Clean Water Act (CWA). These permits may include restrictions on the quantity of pollutants that may be discharged as well as pollutant measurement and reporting requirements. If EPA has approved a test procedure for analysis of a specific pollutant, the NPDES permittee must use an approved test procedure (or an approved alternate test procedure if specified by the permitting authority) for the specific pollutant when measuring the required waste constituent. Similarly, if EPA has established sampling requirements, measurements taken under an NPDES permit must comply with these requirements. Therefore, entities with NPDES permits will potentially be affected by the actions in this rulemaking.

Entities potentially affected by the requirements of this rule include:

Category	Examples of potentially affected entities
State, Territorial, and Indian Tribal Governments	States, territories, and tribes authorized to administer the National Pollutant Discharge Elimination System (NPDES) permitting program; states, territories, and tribes providing certification under CWA section 401; state, territorial, and tribal owned facilities that must conduct monitoring to comply with NPDES permits.
Industry .....	Facilities that must conduct monitoring to comply with NPDES permits.
Municipalities .....	Publicly Owned Treatment Works (POTWs) or other municipality owned facilities that must conduct monitoring to comply with NPDES permits.

This table is not exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists types of entities that EPA is now aware of that could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility is affected by this action, you should carefully examine the applicability language at 40 CFR 122.1 (NPDES purpose and scope), 40 CFR 136.1 (NPDES permits and CWA) and 40 CFR 403.1 (pretreatment standards purpose and applicability). If you have questions regarding the applicability of this action

to a particular entity, consult the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*B. What process governs judicial review of this rule?*

Under Section 509(b)(1) of the Clean Water Act (CWA), judicial review of this CWA rule may be obtained by filing a petition for review in a United States Circuit Court of Appeals within 120 days from the date of promulgation of this rule. For judicial review purposes, this final rule is promulgated as of 1 p.m. (Eastern time) on September 12, 2017 as provided at 40 CFR 23.2.

Section 509(b)(2) provides that any rule (or requirements of any rule) for which review could have been obtained under Section 509(b)(1) may also not be challenged later in civil or criminal proceedings for enforcement.

*C. Abbreviations and Acronyms Used in the Preamble and Final Rule Text*

- 4AAP: 4-Aminoantipyrine
- AA: Atomic Absorption
- ADMI: American Dye Manufacturers Institute
- AOAC: AOAC International
- ASTM: ASTM International
- ATP: Alternate Test Procedure
- BOD<sub>5</sub>: 5-day Biochemical Oxygen Demand test
- CAS: Chemical Abstract Services

CATC: Cyanide Amenable to Chlorination  
 CFR: Code of Federal Regulations  
 CIE/UV: Capillary Ion Electrophoresis/  
 Ultraviolet  
 COD: Chemical Oxygen Demand  
 CWA: Clean Water Act  
 DPD: N,N-diethyl-*p*-phenylenediamine  
 DPD-FAS: N,N-diethyl-*p*-phenylenediamine  
 with ferrous ammonium sulfate  
 EDTA: Ethylenediamine tetraacetic acid  
 EPA: Environmental Protection Agency  
 FLAA: Flame Atomic Absorption  
 Spectroscopy  
 GC: Gas Chromatograph/Chromatography  
 GC/HSD: Gas chromatography/halogen-  
 specific detector  
 GC/MS: Gas chromatography/mass  
 spectrometry  
 HEM: Hexane extractable material  
 HPLC: High performance liquid  
 chromatography  
 HRGC: High Resolution Gas Chromatography  
 HRMS: High Resolution Mass Spectrometry  
 HSD: Halogen-specific detector  
 ICP: Inductively coupled plasma  
 ICP/AES: Inductively Coupled Plasma-  
 Atomic Emission Spectroscopy  
 ICP/MS: Inductively Coupled Plasma-Mass  
 Spectrometry  
 LCS: Laboratory Control Sample  
 MDL: Method Detection Limit  
 MS: Mass Spectrometry  
 MPN: Most Probable Number  
 MS/MSD: Matrix Spike/Matrix Spike  
 Duplicate  
 NARA: National Archives and Records  
 Administration  
 NPDES: National Pollutant Discharge  
 Elimination System  
 NIST: National Institute of Standards and  
 Technology  
 PAH: Polynuclear aromatic hydrocarbons  
 POTW: Publicly Owned Treatment Works  
 QA: Quality Assurance  
 QC: Quality Control  
 RRT: Relative retention time  
 SDDC: Silver diethyldithiocarbamate  
 SGT-HEM: Silica gel treated-hexane  
 extractable material  
 SM: Standard Methods  
 SPADNS: Common name for fluoride dye  
 reagent which is a mixture of chemicals  
 STGFAA: Stabilized Temperature Graphite  
 Furnace Atomic Absorption Spectroscopy  
 TKN: Total Kjeldahl Nitrogen  
 TOC: Total Organic Carbon  
 USGS: United States Geological Survey  
 UV: Ultraviolet  
 VCSB: Voluntary Consensus Standards Body  
 WET: Whole Effluent Toxicity

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## I. Statutory Authority

EPA is promulgating this rule pursuant to the authority of sections 301(a), 304(h), and 501(a) of the Clean Water Act (“CWA”) 33 U.S.C. 1311(a), 1314(h), and 1361(a). Section 301(a) of the CWA prohibits the discharge of any pollutant into navigable waters unless the discharge complies with, among other provisions, a National Pollutant Discharge Elimination System (NPDES) permit issued under section 402 of the CWA. Section 304(h) of the CWA requires the Administrator of the EPA to “\* \* \* promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to [section

401 of the CWA] or permit application pursuant to [section 402 of the CWA].” Section 501(a) of the CWA authorizes the Administrator to “\* \* \* prescribe such regulations as are necessary to carry out this function under [the CWA].” EPA generally has codified its test procedure regulations (including analysis and sampling requirements) for CWA programs at 40 CFR part 136, though some requirements are codified in other Parts (e.g., 40 CFR chapter I, subchapters N and O).

## II. Summary of Final Rule

The following sections describe the changes EPA is making in this final rule. In addition, further information concerning the rule may be found in a document prepared for this rule providing EPA’s responses to comments it received on the proposed rule. That document (“Response to Comments Document for the Methods Update Rule Proposal (80 CFR 8956, February 19, 2015”) is available in the electronic docket listed in the **ADDRESSES** section at the beginning of this document. The following sections describe changes EPA is making in this final rule.

### A. New Versions of Previously Approved EPA Methods in 40 CFR 136.3 and Appendix A

This rule approves new versions of already approved EPA methods and corrects typographical errors in the methods. The following briefly describes the EPA methods added to part 136.

1. EPA Methods 608.3, 611, 624.1 and 625.1

Method 608.3, Organochlorine Pesticides and PCBs by GC/HSD. This method measures organochlorine pesticides and polychlorinated biphenyls (PCBs) in industrial discharges and other environmental samples by gas chromatography (GC) combined with a halogen-specific detector (HSD: e.g., electron capture, electrolytic conductivity), as provided under 40 CFR 136.1.

EPA Method 611, Haloethers. This method measures the following haloethers: Bis(2-chloroethyl) ether, bis(2-chloroethoxy) methane, 2, 2'-oxybis (1-chloropropane), 4-bromophenyl phenyl ether, and 4-chlorophenyl phenyl ether in municipal and industrial discharges by gas chromatography (GC) as provided under 40 CFR 136.1. The only change EPA has made is correcting a typographical error in the list of parameters by changing “4-Chlorophenyl phenyl ether” to “4-Chlorophenyl phenyl ether” and has

corrected an analyte name to 2,2'-oxybis(1-chloropropane), which matches the CAS Number 108-60-1.

EPA Method 624.1, Purgeables by GC/MS. This method measures purgeable organic pollutants in industrial discharges and other environmental samples by gas chromatography (GC) combined with mass spectrometry (MS), as provided under 40 CFR 136.1.

EPA Method 625.1, Base/Neutrals and Acids by GC/MS. This method measures semivolatile organic pollutants in industrial discharges and other environmental samples by GC/MS, as provided under 40 CFR 136.1.

## 2. EPA Methods 1600, 1603, 1680, and 1682

This rule implements the following changes for EPA microbiological methods 1600, 1603, 1680, and 1682 that correct typographical or other errors that EPA identified in the methods after publication. This rule revises all of these methods with new EPA document numbers and dates.

EPA Method 1600 for Enterococci using membrane filtration: In Table 3 Verification controls, EPA changed the negative control for brain heart infusion broth incubated at 45 °C from *Escherichia coli* to *Enterobacter aerogenes*. *E. coli* is thermotolerant and *E. aerogenes* is not, so *E. coli* is not an appropriate negative control when heated.

EPA Method 1603 for *E. coli* using membrane filtration: In section 11.5, EPA changed the number of colonies on a countable plate from 20-60 to 20-80 colonies. Sixty colonies was a typographical error. In addition, the following sentence was inadvertently omitted and EPA included it: Sample volumes of 1-100 mL are normally tested at half-log intervals (e.g., 100, 30, 10, and 3 mL).

EPA Method 1680 for fecal coliforms using multiple tube fermentation: In section 3.1 Definitions, the sentence "The predominant fecal coliform is *E. coli*." now reads "The predominant fecal coliform can be *E. coli*."

EPA Method 1682 for *Salmonella* by MSR/V medium: (1) In section 9.3, Table 2, the lab-prepared spike acceptance criteria now reads: "Detect-254%" and "Detect-287%" and (2) in section 14.5, Table 9, the spiked *Salmonella* for Example 2, Liquid now reads "3.7 x 10<sup>8</sup> CFU/mL."

## B. Methods Incorporated by Reference

Currently, hundreds of methods and ATPs are incorporated by reference within 40 CFR part 136. In most cases, 40 CFR part 136 contains multiple approved methods for a single pollutant

and regulated entities often have a choice in the selected method. This rule incorporates by reference revisions to methods from two VCSBs: Standard Methods and ASTM. The VCSB methods in this rule are in compliance, as discussed more fully in Section IV.I below, with the National Technology Transfer Act which directs EPA to use voluntary consensus standards so long as they are consistent with applicable law and not otherwise impractical. The methods are available on their respective VCSB Web sites to everyone at a cost determined by the VCSB, generally from \$40 to \$80. Both organizations also offer memberships or subscriptions that allow unlimited access to their methods. The cost of obtaining these methods is not a significant financial burden for a discharger or environmental laboratory, making the methods reasonably available. This rule also includes USGS methods and vendor ATPs that are incorporated by reference. The ATPs and USGS methods are available free of charge on the Web site for that organization. Therefore, EPA concludes that the methods and Alternate Test Procedures (ATPs) incorporated by reference are reasonably available. The individual standards are discussed in greater detail below.

### C. New Standard Methods and New Versions of Approved Standard Methods in 40 CFR 136.3

This rule approves new versions of currently approved Standard Methods. The new versions of currently approved Standard Methods clarify or improve the instructions in the method, improve the QC requirements, or make editorial corrections. Consistent with the previous method update rule (77 FR 29758, May 18, 2012), EPA generally approves and includes in 40 CFR part 136 only the most recent version of a method published by the Standard Methods Committee by listing only one version of the method with the year of publication designated by the last four digits in the method number (e.g., SM 3111 B-2011). The date indicates the latest revision date of the method. This allows use of a specific method in any edition that includes a method with the same method number and year of publication.

Most of the revisions included to Standard Methods in this rule do not contain any substantive changes. Each Standard Method entry contains the Standard Methods number and date, the parameter, and a brief description of the analytical technique. The methods listed below are organized according to

the table at 40 CFR part 136 in which they appear.

The following identifies new versions of previously approved Standard Methods that EPA is including in Table IB at 40 CFR part 136. Where there are substantive changes to the method, these are noted:

1. SM 2120 B-2011, color, platinum cobalt visual comparison method.

2. SM 2120 F-2011, color, ADMI weighted-ordinate spectrophotometer method. EPA previously approved this method as SM 2120 E-1993. It is also similar to the currently approved National Council for Air and Stream Improvement, Inc. method that uses American Dye Manufacturers Institute weighted-ordinate spectrophotometric parameters. A footnote on the method specifies that the pH should be 7.6 and not 7.0 when used for NPDES monitoring purposes, since the original method was approved with a reference pH of 7.6. Additionally, the currently approved methods for the Color parameter are assigned more specific parameter names.

3. SM 2130 B-2011, turbidity, nephelometric method.

4. SM 2310 B-2011, acidity, titration using electrometric endpoint or phenolphthalein endpoint.

5. SM 2320 B-2011, alkalinity, electrometric or colorimetric titration to pH 4.5.

6. SM 2340 B-2011 and SM 2340 C-2011, hardness, by the calculation method or EDTA titration.

7. SM 2510 B-2011, conductivity, Wheatstone bridge method.

8. SM 2540 B-2011, SM 2540 C-2011, SM 2540 D-2011, SM 2540 E-2011, and SM 2540 F-2011, total, filterable, non-filterable, volatile, and settleable residue (solids, listed in the same order as the method numbers), all by gravimetric methodologies.

9. SM 2550 B-2010, temperature, thermometric.

10. SM 3111 B-2011, SM 3111 C-2011, SM 3111 D-2011, and SM 3111 E-2011, metals, direct aspiration atomic absorption (AA) methods with different gas mixtures. Each method has a different list of metals; these lists were not changed.

11. SM 3112 B-2011, metals, applicable to mercury, cold-vapor atomic absorption spectrometric method.

12. SM 3113 B-2010, metals, electrothermic atomic absorption spectrometric method. The only substantive change is a reduction in the required replicate analyses of each calibration standard from three to two. Similar EPA methods do not require replicates of each calibration standard.

13. SM 3114 B–2011 and SM 3114 C–2011, total arsenic and total selenium, hydride generation/atomic absorption spectrometric methods. Both analyze total arsenic and total selenium.

14. SM 3120 B–2011, metals, inductively coupled plasma (ICP) method; no changes were made to the approved list of metals.

15. SM 3125 B–2011, metals, inductively coupled plasma/mass spectrometry (ICP/MS) method; no changes were made to the approved list of metals.

16. SM 3500-Al B–2011, aluminum, colorimetric method.

17. SM 3500-As B–2011, arsenic, colorimetric method silver diethyldithiocarbamate (SDDC) method.

18. SM 3500-Ca B–2011, calcium, titrimetric method (EDTA).

19. SM 3500-Cr B–2011 and SM 3500-Cr C–2011, chromium. The “B” method uses a colorimetric method (diphenylcarbazide) and is approved for total or dissolved chromium. The “C” method uses ion chromatography and is only approved for dissolved chromium.

20. SM 3500-Cu B–2011 and SM 3500-Cu C–2011, copper. Both method sections use colorimetric methods. The “B” method uses a neocuproine reagent, and the “C” method uses a bathocuproine reagent.

21. SM 3500-Fe B–2011, iron, colorimetric method (phenanthroline).

22. SM 3500-K B–2011 and SM 3500-K C–2011, potassium. The “B” method is a flame photometric method, and the “C” method is an electrode method.

23. SM 3500-Mn B–2011, manganese, colorimetric method (persulfate).

24. SM 3500-Na B–2011, sodium, flame photometric method.

25. SM 3500-Pb B–2011, lead, colorimetric method (dithizone).

26. SM 3500-V B–2011, vanadium, colorimetric method (gallic acid).

27. SM 3500-Zn B–2011, zinc, colorimetric method (zincon).

28. SM 4110 (B–D)–2011, anions, ion chromatography; no changes were made to the approved analyte list.

29. SM 4140 B–2011, inorganic anions, capillary ion electrophoresis with indirect ultraviolet (UV) detection: No changes were made to the approved analyte list.

30. SM 4500-B B–2011, boron, spectrophotometer or filter photometer (curcumin)

31. SM 4500-Cl<sup>-</sup> (B–E)–2011, chloride, titrimetric: (Silver nitrate), (mercuric nitrate), automated (ferricyanide), potentiometric titration.

32. SM 4500-Cl (B–G)–2011, chlorine (residual), amperometric direct, amperometric direct (low level), iodometric direct, back titration ether

end–point, titrimetric: N,N-diethyl-*p*-phenylenediamine with ferrous ammonium sulfate (DPD-FAS), spectrophotometric (DPD).

33. SM 4500-CN<sup>-</sup> (B–G)–2011, cyanide, manual distillation with MgCl<sub>2</sub> followed by: Titrimetric, spectrophotometric, manual, ion selective electrode, cyanide amenable to chlorination (CATC); manual distillation with MgCl<sub>2</sub>, followed by: Titrimetric or spectrophotometric.

34. SM 4500-F<sup>-</sup> (B–E)–2011, fluoride, manual distillation, followed by any of the following: Electrode, manual, colorimetric, fluoride dye reagent (SPADNS is the common name for the fluoride dye reagent which is a mixture of chemicals), automated complexone.

35. SM 4500-H<sup>+</sup> B–2011, hydrogen ion (pH), electrometric measurement.

36. SM 4500-NH<sub>3</sub> (B–H)–2011, ammonia (as nitrogen), manual distillation or gas diffusion (pH > 11), followed by any of the following: Titration, electrode, manual phenate, salicylate, or other substituted phenols in Berthelot reaction based methods; automated phenate, salicylate, or other substituted phenols in Berthelot reaction based methods.

37. SM 4500-NO<sub>2</sub><sup>-</sup> B–2011, nitrite (as nitrogen), spectrophotometric: Manual.

38. SM 4500-NO<sub>3</sub><sup>-</sup> D–2011, nitrate (as nitrogen), ion selective electrode.

39. SM 4500-NO<sub>3</sub><sup>-</sup> (E, F, H)–2011, nitrate-nitrite (as nitrogen), colorimetric: Cadmium reduction-manual and automated, and colorimetric: Automated hydrazine.

40. SM 4500-NO<sub>3</sub><sup>-</sup> (E, F)–2011, nitrite (as nitrogen), colorimetric: Cadmium reduction-manual and automated.

41. SM 4500-N<sub>org</sub> (B–D)–2011, total Kjeldahl nitrogen (as nitrogen, organic), semi-automated block digester colorimetric (distillation not required).

42. SM 4500-O (B–G)–2011, oxygen (dissolved), Winkler (azide modification), electrode.

43. SM 4500-P (B(5), E–H)–2011, phosphorus and ortho-phosphate, persulfate digestion, digestion, followed by any of the following: Manual or automated ascorbic acid reduction. The “B Part 5” method is the persulfate digestion procedure and is required prior to measurement of total phosphorus using SM 4500 P (E–H). The “E” through “G” methods are approved for both total phosphorus and ortho-phosphate. The “H” method is only approved for total phosphorous.

44. SM 4500-S<sup>2-</sup> (B–D, F, G)–2011, sulfide, sample pretreatment, titrimetric (iodine) analysis, colorimetric (methylene blue), ion selective electrode.

45. SM 4500-SiO<sub>2</sub> (C, E, F)–2011, silica, 0.45-micron filtration followed by any of the following: Colorimetric, manual or automated (molybdosilicate).

46. SM 4500-SO<sub>3</sub><sup>2-</sup> B–2011, sulfite, titrimetric (iodine-iodate).

47. SM 4500-SO<sub>4</sub><sup>2-</sup> (C–G)–2011, sulfate, automated colorimetric, gravimetric, and turbidimetric.

48. SM 5210 B–2011, biochemical oxygen demand (BOD<sub>5</sub>), dissolved oxygen depletion.

49. SM 5220 (B–D)–2011, chemical oxygen demand (COD), titrimetric; spectrophotometric, manual or automatic.

50. SM 5310 (B–D)–2011, total organic carbon (TOC), combustion, heated persulfate or UV persulfate oxidation.

51. SM 5520 (B, F)–2011, oil and grease, hexane extractable material (HEM): *n*-hexane extraction and gravimetry, silica gel treated HEM (SGT–HEM): Silica gel treatment and gravimetry.

52. SM 5530 (B, D)–2010, phenols, manual distillation, followed by colorimetric 4-aminoantipyrine (4AAP) manual.

53. SM 5540 C–2011, surfactants, colorimetric (methylene blue).

The following identifies new versions of previously approved Standard Methods that EPA is including in Table IC at 40 CFR part 136:

1. SM 6200 (B, C)–2011, volatile organic compounds, purge and trap capillary-column gas chromatographic/mass spectrometric (GC/MS), purge and trap capillary-column gas chromatographic (GC)

2. SM 6440 B–2005, polynuclear aromatic hydrocarbons (PAHs), high performance liquid chromatography (HPLC)

The following identifies new versions of previously approved methods that EPA is including in Table ID at 40 CFR part 136:

1. SM 6630 (B, C)–2007, organochlorine pesticides, gas chromatography (GC)

2. SM 6640 B–2006, acidic herbicide compounds, gas chromatography (GC)

EPA also revised the approval of certain Standard Methods previously approved in part 136 for which Standard Methods adopted updates that contain substantive changes. The following summarizes these changes for each method, organized by the table at 40 CFR part 136 in which they appear.

The following identifies previously approved Standard Methods in Table IA and/or Table IH at 40 CFR part 136 Table IB at 40 CFR part 136 where there are substantive changes to the method:

1. EPA replaced the membrane filtration method SM 9222 B–1997 with

SM 9222 B–2006. This method analyzes Coliform (total) in the presence of chlorine. The newer method includes a number of technology updates that do not significantly change the procedure. In addition, the method:

a. Modified the procedure to allow for the use of a humidified incubator if loose-lidded plates are used during incubation.

b. Added a note that five typical and five atypical colonies per membrane need to be identified during coliform verification.

c. Moved the definition of “Coliform” that was Section 4 of SM 9222, and renumbered the rest of the document, such that the “Procedure” is now Section 4, instead of Section 5. This is not a substantive change except that in Table IA, Parameter 4 “Coliform (total), in presence of chlorine, number per 100 mL” the citation for “MF with enrichment” will be changed from “9222 (B+B.5c)–1997” to “9222 (B+B.4c)–2006.”

2. This rule replaces the membrane filtration method SM 9222 D–1997 with SM 9222 D–2006. This method analyzes Coliform (fecal) and Coliform (fecal) in the presence of chlorine. The new method allows use of a dry recirculating incubator as specified in the culture dishes section. In addition, this rule adds the following footnote to Tables IA and IH regarding SM 9222 D–2006 for fecal coliform verification frequency: “The verification frequency is at least five typical and five atypical colonies per sampling site on the day of sample collection & analysis.” SM 9222 D–2006 specifies that the fecal coliform colonies should be verified “at a frequency established by the laboratory,” which can be as low as zero. Colonies need to be verified to prevent misidentification of results as false positive or false negative.

3. This rule replaces the membrane filtration method SM 9222 G–1997 with SM 9222 G–2006 in Table IH. These methods analyze for *E. coli* and Fecal Coliforms. The newer method includes a number of technology updates that do not significantly change the procedure. In addition, the method now has a modified composition of EC broth to include different quantities of  $\text{KH}_2\text{PO}_4$  and 4-methylumbelliferyl- $\beta$ -D-glucuronide.

#### *D. New Versions of Approved ASTM Methods in 40 CFR 136.3*

This rule approves new versions of currently approved ASTM methods, for the same reasons outlined in the first paragraph of Section II.B above. Many of the new versions of ASTM Methods approved in 40 CFR part 136 do not

contain any substantive changes. Each entry contains (in the following order): Approved ASTM method number and date, the parameter, a brief description of the analytical technique. Where there were substantive changes, they are identified. The methods listed below are organized according to the table at 40 CFR part 136 in which they appear.

The following identifies new versions of currently approved ASTM methods that are included in Table IB at 40 CFR part 136:

1. ASTM D 511–09 (A, B), calcium and magnesium, titrimetric ethylenediamine tetraacetic acid (EDTA), AA direct aspiration.
2. ASTM D 516–11, sulfate ion, turbidimetric.
3. ASTM D 858–12 (A–C), manganese, atomic absorption (AA) direct aspiration, AA furnace.
4. ASTM D 859–10, silica, colorimetric, manual.
5. ASTM D 1067–11, acidity or alkalinity, electrometric endpoint or phenolphthalein endpoint; electrometric or colorimetric titration to pH 4.5, manual.
6. ASTM D 1068–10 (A–C), iron, AA direct aspiration; AA furnace; colorimetric (phenanthroline).
7. ASTM D 1126–12, hardness, titrimetric (EDTA).
8. ASTM D 1179–10 (A, B), fluoride ion, electrode, manual; colorimetric, (SPADNS).
9. ASTM D 1246–10, bromide ion, electrode.
10. ASTM D 1687–12 (A–C), chromium (total) and dissolved hexavalent chromium, colorimetric (diphenyl-carbazide); AA direct aspiration; AA furnace.
11. ASTM D 1688–12 (A–C), copper, AA direct aspiration, AA furnace.
12. ASTM D 1691–12 (A, B), zinc, AA direct aspiration.
13. ASTM D 1976–12, dissolved, total-recoverable, or total elements, inductively coupled plasma/atomic emission spectroscopy (ICP/AES).
14. ASTM D 3223–12, total mercury, cold vapor, manual.
15. ASTM D 3373–12, vanadium, AA furnace.
16. ASTM D 3557–12 (A–D), cadmium, AA direct aspiration, AA furnace, voltammetry.
17. ASTM D 3590–11 (A, B), total Kjeldahl nitrogen, manual digestion and distillation or gas diffusion; semi-automated block digester colorimetric (distillation not required).
18. ASTM D 4382–12, barium, AA furnace.
19. ASTM D 4658–09, sulfide ion, ion selective electrode.

20. ASTM D 5257–11, dissolved hexavalent chromium, ion chromatography.

21. ASTM D 5673–10, dissolved elements and total-recoverable elements, ICP/MS.

22. ASTM D 5907–13, filterable matter (total dissolved solids) and nonfilterable matter (total suspended solids), gravimetric, 180 °C gravimetric, 103–105 °C post washing of residue.

23. ASTM D 6508–10, inorganic anions (fluoride, bromide, chloride, nitrite, nitrate, orthophosphate, and sulfate), capillary ion electrophoresis with indirect UV detection.

24. ASTM D 7284–13, total cyanide, manual distillation with  $\text{MgCl}_2$  followed by flow injection, gas diffusion amperometry.

25. ASTM D 7511–12, total cyanide, segmented flow injection, in-line ultraviolet digestion, followed by gas diffusion amperometry.

EPA has changed Table IC at 40 CFR part 136 as follows:

1. ASTM D 7065–11, nonylphenol, bisphenol A, *p*-tert-octylphenol, nonylphenol monoethoxylate, nonylphenol diethoxylate, gas chromatography/mass spectrometry (GC/MS).

#### *E. New United States Geological Survey (USGS) Methods in 40 CFR 136.3*

1. This rule adds USGS Methods I–2547–11 and I–2548–11 titled “Colorimetric Determination of Nitrate Plus Nitrite in Water by Enzymatic Reduction, Automated Discrete Analyzer Methods,” to Table IB for the analytes nitrate, nitrite, and combined nitrate-nitrite. Method I–2548–11 is a low level (analytical range) version of Method I–2547–11. Both methods are included in the same method title. The method can be found in USGS Survey Techniques and Methods, Book 5, Chapter B8. The method is available at no cost from the USGS Web site. This method follows the same procedure as in ATP Case No. N07–0003—Nitrate Elimination Company Inc.’s (NECi) Method N07–0003, Revision 9.0, March 2014, “Method for Nitrate Reductase Nitrate-Nitrogen Analysis,” which EPA approved in this rule.

#### *F. New ATPs in 40 CFR 136.3*

This rule approves six methods submitted to EPA for review through the alternate test procedures (ATP) program and deemed acceptable based on the evaluation of documented method performance.

The following ATP has nationwide approval for wastewater and is incorporated into Table IA:

1. IDEXX Laboratories, Inc., Colilert®-18, “Coliform/ Test for Fecal Coliforms in Wastewater” (ATP Case No. N09-0004). The method is similar to the already approved *E. coli* Colilert®-18 method, with the addition of an increased incubation temperature for fecal coliforms, which requires the use of a waterbath incubator. The Colilert®-18 Coliform/ Substrate Test can be obtained from IDEXX Laboratories Inc., One IDEXX Drive, Westbrook, ME 04092. Telephone: 800-321-0207.

The following four ATPs have nationwide approval for all matrix types and are incorporated into Table IB:

1. The Nitrate Elimination Company Inc. (NECi) Method N07-0003, “Nitrate Reductase Nitrate-Nitrogen Analysis,” Revision 9.0, dated March 2014 (The Nitrate Elimination Company, Inc., 2014a). The analysis measures nitrate, nitrite, and combined nitrate-nitrite. NECi Method N07-0003 is a “green” alternative to the other approved methods which use cadmium, a known carcinogen for the reduction of nitrate to nitrite prior to analyses. NECi Method N07-0003 can be obtained from The Nitrate Elimination Company, 334 Hecla Street, Lake Linden, Michigan, 49945. Telephone: 888-NITRATE.

2. Timberline Instruments, LLC Method Ammonia-001, “Determination of Inorganic Ammonia by Continuous Flow Gas Diffusion and Conductivity Cell Analysis,” dated June 24, 2011 (Timberline Instruments, LLC 2011a). Timberline Instruments, LLC Method Ammonia-001 can be obtained from Timberline Instruments, LLC, 1880 South Flatiron Court, Boulder, Colorado 80301. Telephone: 303-440-8779.

3. Hach Company Method 10242, “Simplified Spectrophotometric Measurement of Total Kjeldahl Nitrogen in Water and Wastewater,” Revision 1.1, dated January 10, 2013 (Hach Company 2013a). Hach Company Method 10242 is a simplified green chemistry alternative to the other approved methods for measuring TKN. The method uses less toxic reagents (e.g., eliminating the use of mercuric sulfate). Hach Company Method 10242 can be obtained from Hach Company, 5600 Lindbergh Drive, Loveland, CO 80539. Telephone: 970-669-3050.

4. Hach Company Method 10206, “Spectrophotometric Measurement of Nitrate in Water and Wastewater,” Revision 2.1, dated January 10, 2013 (Hach Company 2013b). Hach Company Method 10206 is a “green” alternative to the other approved methods which use cadmium, a known carcinogen for the reduction of nitrate to nitrite prior to analyses. Hach Company Method 10206

can be obtained from Hach Company, 5600 Lindbergh Drive, Loveland, CO 80539. Telephone: 970-669-3050.

The following ATP has nationwide approval for only pulp, paper and paperboard mill biologically treated effluent and is incorporated into Table IB:

1. National Council for Air and Stream Improvement, Inc. (NCASI) Method TNTP-W10900, “Total (Kjeldahl) Nitrogen (TKN) and Total Phosphorus in Pulp and Paper Biologically Treated Effluent by Alkaline Persulfate Digestion,” dated June 2011 (National Council for Air and Stream Improvement, Inc. 2011a). NCASI Method TNTP-W10900 can be obtained from The National Council for Air and Stream Improvement, Inc., Publications Coordinator, P.O. Box 13318, Research Triangle Park, NC 27709-3318, Telephone: 919-941-6400.

#### G. Changes to 40 CFR Part 136 To Align With 40 CFR Part 122

This rule amends 40 CFR 136.1 to substitute the term “Director” for the terms “Administrator” and “State having an authorized program.” In addition, the rule amends 40 CFR 136.2(d) to state that the term “Director” by cross-reference to the definition of “Director” in the NPDES regulations at 40 CFR 122.2.

EPA eliminated the words “be sufficiently sensitive and” from 40 CFR 136.6(b)(2) to eliminate unnecessary confusion with the term “sufficiently sensitive,” as used in 40 CFR 122. Deleting this term did not change the requirements of 40 CFR 136.6(b)(2).

#### H. Corrections to 40 CFR Part 136

This rule corrected typographical errors, updated methods from VCSBs that went unnoticed during the last update to 40 CFR part 136, and added technology updates to toxicity methods.

1. This rule makes multiple clarifications and corrections to the Whole Effluent Toxicity acute and chronic methods manuals (Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012, October 2002; Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/821/R-02/013, October 2002; and Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA/821/R-02/014, October 2002) listed in Table IA. Clarifications included definition of terms (e.g., the acronym YCT—yeast, cereal leaves, and trout chow, was not

defined), consistency corrections among the three manuals, notation that Cusum figure axes should be log scale, pH and temperature measurements should be done at the beginning of the test (rather than only at the end of the test), etc. Corrections also included deletion of unavailable products, typographical errors, etc. Among the corrections that EPA proposed was a change to the language for Fathead Minnows, Daphnids, and Green Alga in the document *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA/821/R-02/013, October 2002. For Fathead Minnows and Daphnids, EPA proposed to change “Conductivity, alkalinity, and hardness are measured in each new sample (100% effluent or receiving water) and in the control” to read “Conductivity, alkalinity, and hardness are measured at the beginning of the test for all test concentrations in each new sample and in the control before they are dispersed to the test chambers.” EPA received a number of comments stating that this change would constitute a change to the test rather than a correction or clarification. EPA is in agreement with these comments, and for that reason, will not add the inserted language “at the beginning of the test for all test concentrations.” EPA is retaining its deletion of “(100% effluent or receiving water)” and the insertion of “before they are dispensed to the test chamber” to the end of the sentence. Thus, the sentence will now read “Conductivity, alkalinity, and hardness are measured in each new sample and in the control before they are dispensed to the test chamber.” For Green Alga, the proposed change has been eliminated from the errata because only the increased testing was proposed.

2. This rule changes the Standard Method listed for *E. coli* most probable number (MPN) in Tables IA and IH. During a previous revision, Standard Methods added sampling as section 9221 B.1. As a result, section 9221 B.1 in previously approved versions has become section 9221 B.2. EPA changed SM 9221 B.1 to 9221 B.2 in Tables IA and IH for *E. coli* MPN. The related footnotes in Tables IA and IH (12, 14 and 11, 13, respectively) are accurate and EPA did not propose to change them.

3. This rule adds a line for Enterococci that was erroneously deleted in the 2012 Methods Update Rule. The line states “MPN, multiple

tube” with Standard Method 9230B–2007.

4. This rule revises a hardness entry in Table IB to state “Ca plus Mg as their carbonates, by any approved method for Ca and Mg (See Parameters 13 and 33), provided that the sum of the lowest point of quantitation for Ca and Mg is below the NPDES permit requirement for Hardness.” Previously, this was only allowed for inductively coupled plasma or AA direct aspiration Ca and Mg methods. The rationale behind this change is that if one calcium and magnesium method approved by EPA can be used to calculate hardness, then other EPA approved methods should also be permitted to do so.

5. This rule deletes “p 14” from footnote 24 of Table IB because the method is not on that page.

6. This rule deletes Method 200.5, in Table IB from the cobalt, molybdenum and thallium entries. These analytes have not undergone formal testing by this method, and this method should not have been approved for these analytes.

7. This rule removes the reference to costs in 40 CFR 136.3(b) because costs are not included in the referenced documents.

8. This rule removes the first instance of “are” in 40 CFR 136.3(e) because it is a typographical error.

#### *I. Changes to Table II at 40 CFR 136.3(e) to Required Containers, Preservation Techniques, and Holding Times*

This rule revises Table II at 40 CFR 136.3(e) as follows.

1. The rule adds rows to Table II that specify holding times for total/fecal coliforms, and fecal streptococci in Table IH. Previously the holding times for these bacterial tests were unspecified. Now these methods have the same holding time requirements as the other bacterial tests.

2. This rule changes the sodium thiosulfate concentrations in Table II for bacterial tests from 0.0008% sodium thiosulfate to 0.008%. EPA proposed this change in its last update to 40 CFR part 136 (75 FR 58066–58067), but inadvertently omitted it in the publication of the final rule.

3. The rule re-inserts language that was accidentally deleted from footnote 5 of Table II during the previous update to 40 CFR part 136. Footnote 5 now reads “ASTM D7365–09a specifies treatment options for samples containing oxidants (e.g., chlorine) for cyanide analysis. Also, Section 9060A of Standard Methods for the Examination of Water and Wastewater (20th and 21st editions) addresses dechlorination procedures for

microbiological analyses.” Previously, the words: “for microbiological analyses,” were not present, so the footnote did not specify that treatment options for samples containing oxidants is specifically for cyanide analysis, and that the dechlorination procedures are specifically for microbiological analyses.

4. EPA requested public comment on how to approve variances to sample preservation, containers or holding times listed in Table II for specific dischargers. Currently, 40 CFR 136.3(e) grants authority to either the permitting authority in the Region or the Regional ATP Program Coordinator to grant exceptions to Table II for a specific discharger.

Of the eight comments received, four commenters thought that the permitting authority should have the sole authority to approve these variance requests. Three commenters thought that the Regional ATP Program Coordinators should have sole authority to approve variance requests, and one commenter thought that the best approach was for the permitting authority and the Regional ATP Program Coordinator to approve Table II variances for specific dischargers collaboratively. Each of these commenters provided sound reasoning for their suggested approach to the review and approval of these types of requests.

EPA has chosen to defer any decision on revising the current language and to leave 40 CFR 136.3(e) unchanged in this final rule.

#### *J. Clarifications/Corrections to ATP Procedures in 40 CFR 136.4, 136.5 and Allowed Modifications in 136.6*

40 CFR 136.4 and 136.5 describe EPA procedures for obtaining approval to use an alternate test procedure either on a national basis, or for limited use by dischargers or facilities specified in the approval. In the 2012 Method Update Rule, EPA made several clarifying changes to the language of these sections. At the same time, however, in many places in 40 CFR 136.4 and 136.5 where the phrase “Regional Alternate Test Procedures Coordinator” or “Regional ATP Coordinator” appears, EPA inadvertently also inserted the phrase “or permitting authority” following the phrase. This error resulted from the use of the “search and replace” function on the computer. The effect of the change was to inadvertently authorize State permitting authorities to approve ATPs for limited use within the State. EPA never intended this result, as is demonstrated by two facts. First, in its proposal for the 2012 Update (75 FR 58024, September 23, 2010), EPA did

not propose to authorize State NPDES permitting authorities to approve limited use ATPs. Second, the rule states that the approval may be restricted to specific dischargers or facilities, or to all dischargers or facilities “specified in the approval for the Region.” (emphasis added). This language evidenced EPA’s intent that only the Region—not the State—would be authorized to issue any such limited use ATP approval. Finally, as further evidence of EPA’s intent, in several places, the text of the rule only makes sense if read to authorize only the Regional ATP Coordinator, not the State permitting authority, to approve limited use ATPs. For example, 40 CFR 136.5(d)(1) provides that after a review of the application by the Alternate Test Procedure Regional ATP Coordinator or permitting authority, the Regional ATP Coordinator or permitting authority notifies the applicant and the appropriate State agency of approval or rejection of the use of the alternate test procedure. As previously written, if the State is acting on a request for approval, the regulation would require the State to inform itself of its own action in approving or rejecting the ATP, a superfluous requirement.

This rule deletes all instances of “or permitting authority” from 40 CFR 136.4 and 136.5 to correct this error and revise the rule text to its original intent. Based on this revision, EPA and EPA alone has the authority to approve limited use ATPs.

This rule also changes 40 CFR 136.4 and 136.5 to clarify the process for nationwide ATP approvals and the Regional ATP Coordinator’s role in limited use ATP approvals. These changes do not significantly change the process; the intent is to make the text simpler and clearer.

Finally, this rule adds language to 40 CFR 136.6(b)(1) to clarify that if a method user is uncertain whether or not a modification is allowed under 40 CFR 136.6, the user should contact either their Director or EPA Regional ATP Coordinator.

#### *K. Changes to Appendix B to 40 CFR Part 136—Definition and Procedure for the Determination of the Method Detection Limit (MDL)*

EPA is revising the procedure for determination of the MDL primarily to address laboratory blank contamination and to better account for intra-laboratory variability. The MDL procedure has not been revised since it was originally promulgated in 1983. The suggestion for these revisions came first from The National Environmental Laboratory Accreditation Conference (NELAC)

Institute. EPA proposed to adopt these revisions. Following proposal, EPA further evaluated the proposed revision in conjunction with input from the states and commercial laboratories. EPA received extensive comments on the proposed revisions.

The revisions address the following issues and add new requirements in the following areas.

**Background contamination.** Under the revisions to appendix B, laboratories are required to evaluate the MDL to account for background levels of contamination. As laboratory methods become more and more sensitive, background levels of contamination are more likely to contribute to the result. These revisions will reduce false positive detects.

**MDLs that represent multiple instruments.** Under the revisions, if a laboratory uses MDL values that represent multiple instruments, then the laboratory is required to calculate the MDL by analyzing MDL samples and method blanks on all of these instruments. (*Note:* MDL samples are a reference matrix, such as reagent water, spiked with a known and consistent quantity of the analyte.) Previously, laboratories were known to run all of their prepared MDL samples on the most sensitive instrument, and then use that MDL for other instruments. This modification makes the MDL more representative of the laboratory's actual analytical capability. Deriving an MDL that is representative of multiple instruments is an option, not a requirement; laboratories can determine individual MDL values for individual instruments if they prefer.

Under the revisions, laboratories are required to run MDL samples and method blanks every quarter that samples are analyzed using a specific method. Previously, laboratories redetermined the MDL once a year, often under the most ideal circumstances (*e.g.*, immediately after the instrument has been serviced or after an annual maintenance routine). Quarterly MDL samples and method blanks will determine if the detection limit has significantly drifted over time. Laboratories will be exempt from running the quarterly MDL samples and method blanks for a method during quarters when no samples are analyzed using that method. The ongoing quarterly MDL samples and method blanks are used to calculate the MDL every year, recalculation of the MDL is required once every thirteen months. Thirteen months was selected to give laboratories more flexibility. For example, a laboratory can recalculate an MDL on January 8th one year and then

January 17th the next, and still be in compliance.

EPA received comments from industries that purchase laboratory services that stated the revised MDL procedure may increase laboratory costs, but not significantly. EPA also received comments from some laboratories stating the revised MDL procedure would impose increased costs to laboratories, while other laboratories stated the opposite. The majority of commenters supported the revised MDL procedure. All of the laboratory associations, who represent the laboratory community, commented in favor of the revised MDL procedure. Comments not in favor of the MDL revision were received from individual laboratories, individuals, one utility, and two state government departments.

As a result of the comments, EPA has made minor clarifications to the MDL procedure. Two options were added to the MDL procedure as a result of comments received: (1) A streamlined approach to determine whether a new instrument can be added to a group of instruments with an already established MDL and (2) laboratories have the option to use only the last six months of method blank data or the fifty most recent method blanks, whichever yields the greater number of method blanks to calculate the MDL value derived from method blanks (MDLb). Both of these changes are in line with the goals of the revised MDL procedure, and are responsive to the comments received. Neither of these additions are mandatory; however, they provide the laboratory with more options for calculating the MDL. Commenters also noted that the detection limit definition in § 136.2(f) should undergo a minor revision to match the revisions in the MDL procedure (which the definition references). The words, "distinguishable from the method blank results" has been replaced with "greater than zero" in the definition.

### III. Changes Between the Proposed Rule and the Final Rule

Except as noted below, the content of the final rule is the same as that of the proposed rule.

#### A. Changes to Footnote 30 in Table IA and Footnote 27 in Table IH

These footnotes regard SM 9222 D–2006 for fecal coliform verification frequency. EPA proposed a requirement of "at least five typical and five atypical colonies per sampling site on the day of collection and analysis." A number of commenters identified deficiencies with the proposed changes. After further review, EPA has determined that

footnote 30 in Table IA and footnote 27 in Table IH require both modification and clarification and is changing both footnotes to read "On a monthly basis, at least ten blue colonies from the medium must be verified using Lauryl Tryptose Broth and EC broth, followed by count adjustment based on these results; and representative non-blue colonies should be verified using Lauryl Tryptose Broth. Where possible, verifications should be done from randomized sample sources."

#### B. Changes to Table IB

As pointed out by multiple commenters, and verified by EPA, the color parameter in Table IB contains methodologies and methods that are mislabeled. EPA reorganized the Color methodology descriptions and methods as follows: (1) The ADMI colorimetric procedure SM 2120 F–2011 is now listed on a new "ADMI" methodology row. (2) Footnote 18 is listed on the table row with the methodology "spectrophotometric," and footnote 18 lists both NCASI Technical Bulletin 253 (1971) and NCASI Technical Bulletin 803 (2000). NCASI Technical Bulletin 803 is an update to NCASI Technical Bulletin 253 for the measurement of color in pulp mill wastewaters. The update adds a stabilizing pH buffer and turbidity reduction approaches. (3) SM 2120 B–2011 and USGS Method I–1250–85 are on a methodology row labeled "platinum cobalt visual comparison" methods.

The Capillary Ion Electrophoresis/Ultraviolet (CIE/UV) method, D6508, Rev. 2 has been moved from the ASTM column to the USGS/AOAC/Other column because this method is available from Waters Corporation (see footnote 54 in Table IB). This affects the following parameters: Bromide, mg/L; chloride, mg/L; fluoride—total, mg/L; nitrate (as N), mg/L; nitrite (as N), mg/L; orthophosphate (as P), mg/L; and sulfate (as SO<sub>4</sub>) mg/L.

#### C. Changes to Table II

A time clarification of 15 minutes has been added to the parameter for Temperature.

The parameter 2-Chloroethylvinyl ether has been moved from the first row for Table IC organic tests to a separate row. Section 9.7 of the revised EPA Method 624.1 notes that acidification will destroy 2-chloroethylvinyl ether. Thus, adding HCl to pH 2 would not be acceptable for this parameter.

*D. Change to Method Modifications and Analytical Requirements in § 136.6, Methods Modification Paragraph*

For clarification purposes, the following two lines have been added to the methods modification paragraph (b): Where the laboratory is using a vendor-supplied method, it is the QC criteria in the reference method, not the vendor's method that must be met to show equivalency. Where a sample preparation step is required (*i.e.*, digestion, distillation), QC tests are to be run using standards treated in the same way as samples.

Also in this paragraph, the paragraph (b)(4)(xvi), "Changes are allowed in purge-and-trap sample volumes or operating conditions," was incorrectly deleted and is being reinstated.

Further, paragraph (b)(4)(xvii), regarding allowable modifications to Method 625, is being deleted as Method 625 has been replaced in its entirety with an updated version with this rulemaking.

*E. Changes to EPA Method 608.3*

EPA received numerous comments on Method 608.3, ranging from pointing out minor typographical errors to questioning substantive technical aspects of the proposed method. In response, EPA revised the method to address many of those comments. See the Response to Comments document available in the electronic docket listed in the **ADDRESSES** section at the beginning of this document for a detailed description of the changes.

Additionally, based on comments received in response to the proposal, EPA is reverting to the MDL values in the earlier version of Method 608 for those analytes that were included in Table 1 of Method 608.3. The MDLs in the proposed version of 608.3 were chosen for the proposed revision because they were determined with a capillary GC column. However, as noted by commenters, the values are not derived from a multiple laboratory validation study. Therefore, EPA has restored the original Method 608 MDL values. At such time as EPA develops new multi-laboratory MDL and ML values for the method, they will be included in a future revision and rulemaking.

Although EPA received comments about updating the QC acceptance criteria in Method 608.3, EPA did not adopt such changes because EPA lacks data from a multi-laboratory validation study from which to develop such criteria.

*F. Change to EPA Method 611*

In Section 1.1, EPA corrected the last parameter in the list of parameters table, that read "4-Chlorophenyl phenyl ether," a typographical error. The word "either" should be "ether." The correct parameter name is "4-Chlorophenyl phenyl ether."

*G. Changes to EPA Method 624.1*

EPA received numerous comments on Method 624.1, ranging from pointing out minor typographical errors to questioning substantive technical aspects of the proposed method. In response, EPA revised the method to address many of those comments. See the response to comments document available in the docket listed in the **ADDRESSES** section at the beginning of this document for a detailed description of the changes.

Additionally, section 8.1.2.1.2, subsection e, Sample matrices on which MS/MSD tests must be performed for nationwide use of an allowed modification, has been changed to update the web link for the list of industrial categories with existing effluent guidelines to <https://www.epa.gov/cwa-methods/alternate-test-procedure-documents>.

Although EPA received comments about updating the QC acceptance criteria in Method 624.1, EPA did not adopt such changes because EPA lacks data from a multi-laboratory validation study from which to develop such criteria.

*H. Changes to EPA Method 625.1*

EPA received numerous comments on Method 625.1, ranging from pointing out minor typographical errors to questioning substantive technical aspects of the proposed method. In response, EPA revised the method to address many of those comments. See the response to comments document available in the electronic docket listed in the **ADDRESSES** section at the beginning of this document for a detailed description of the changes.

Additionally, as was the case with EPA Method 624.1, section 8.1.2.1.2, subsection e, Sample matrices on which MS/MSD tests must be performed for nationwide use of an allowed modification, has been changed to update the web link for the list of industrial categories with existing effluent guidelines to <https://www.epa.gov/cwa-methods/alternate-test-procedure-documents>.

Although EPA received comments about updating the QC acceptance criteria in Method 625.1, EPA did not implement such changes because EPA

lacks data from a multi-laboratory validation study from which to develop such criteria.

*I. Changes to Method Detection Limit (MDL) Procedure, Appendix B*

No significant revisions were made to the proposed MDL procedure. Some flexibility was added to the procedure, as is discussed in Section II.K above.

*J. Changes to WET Errata*

Among the corrections that EPA proposed was a change to the language for Fathead minnows, Daphnids, and Green Alga in the document *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA/821/R-02/013, October 2002. For Fathead Minnows and Daphnids, EPA proposed to change "Conductivity, alkalinity, and hardness are measured in each new sample (100% effluent or receiving water) and in the control" to read "Conductivity, alkalinity, and hardness are measured at the beginning of the test for all test concentrations in each new sample and in the control before they are dispersed to the test chambers." EPA agrees with commenters that this change would constitute a change to the test rather than a correction or clarification. For that reason, EPA will not add the inserted language "at the beginning of the test for all test concentrations." EPA is retaining its deletion of "(100% effluent or receiving water)" and the insertion of "before they are dispensed to the test chamber" to the end of the sentence. Thus, the sentence will now read "Conductivity, alkalinity, and hardness are measured in each new sample and in the control before they are dispensed to the test chamber." For Green Alga, the proposed change has been eliminated from the errata because only the increased testing was proposed.

**IV. Statutory and Executive Order Reviews**

*A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This rule is not a "significant regulatory action" under the terms of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under EO 12866 and EO 13563.

*B. Paperwork Reduction Act*

This action does not impose an information collection burden under the provisions of the Paperwork Reduction

Act, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). This rule does not impose any information collection, reporting, or recordkeeping requirements. This rule merely adds new and revised versions of testing procedures, and sample preservation requirements.

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities for methods under the Clean Water Act, small entity is defined as: (1) A small business that meets RFA default definitions (based on SBA size standards) found in 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This action approves new and revised versions of testing procedures. Generally, these changes will have a positive impact on small entities by increasing method flexibility, thereby allowing entities to reduce costs by choosing more cost-effective methods.

### D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for State, local, or tribal governments, or the private sector.

EPA has determined that this final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Generally, this action will have a positive impact by increasing method flexibility, thereby allowing method users to reduce costs by choosing more cost effective methods. In some cases, analytical costs may increase slightly due to changes in methods, but these

increases are neither significant, nor unique to small governments. This rule merely approves new and revised versions of testing procedures, and new sample collection, preservation, and holding time requirements.

Thus, this rule is not subject to the requirements of Section 203 of UMRA.

### E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, Aug. 10, 1999). This rule merely approves new and revised versions of testing procedures, and new sample collection, preservation, and holding time requirements. The costs to State and local governments will be minimal. In fact, governments may see a cost savings because the rule adds flexibility for laboratories and permittees to choose between additional approved test methods and it also provides additional flexibility to modify existing test methods. Thus, laboratories and permittees will not make as many requests for approval of alternative test methods or method modifications, and the rule does not preempt State law. Thus, Executive Order 13132 does not apply to this rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed rule from State and local officials.

### F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This final rule does not have tribal implications, as specified in Executive Order 13175, (65 FR 67249, Nov. 9, 2000). It will not have substantial direct effects on Tribal governments, 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. This rule merely approves new and revised versions of testing procedures, and new sample collection, preservation, and holding time requirements. The costs to tribal governments will be minimal. In fact, tribal governments may see a cost savings because the rule adds flexibility for laboratories and permittees to choose between additional approved test methods and it also provides additional

flexibility to modify existing test methods. Thus, laboratories and permittees will not make as many requests for approval of alternative test methods or method modifications. Thus, Executive Order 13175 does not apply to this rule.

In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and Indian tribes, EPA specifically solicited comment on the proposed rule from tribal officials. EPA did not receive any comments from Indian tribes.

### G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets E.O. 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the E.O. has the potential to influence the regulation. This action is not subject to E.O. 13045 because it does not establish an environmental standard intended to mitigate health or safety risks. This rule approves new and revised versions of testing procedures, and new sample collection, preservation, and holding time requirements.

### H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355 (May 22, 2001)) because it is not a significant regulatory action under Executive Order 12866.

### I. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995, (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., material specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through the OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rule approves the use of technical standards developed by the Standard Methods Committee, and

ASTM International for use in compliance monitoring where the Agency has determined that those standards meet the needs of Clean Water Act programs. EPA did not propose to add one Standard Method because that method had not undergone full inter-laboratory validation as recommended in current Agency guidance (see Section IV.C of the proposal for this rule (80 FR 8956, February 19, 2015)). All proposed voluntary consensus standards are approved in this rule.

*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order (E.O.) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

This final rule provides additional compliance methods for use by any facility or laboratory with no disproportionate impact on minority or low-income populations because it merely approves new and revised versions of testing procedures to measure pollutants in water.

*K. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA 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 publication of the rule in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective September 27, 2017.

**List of Subjects in 40 CFR Part 136**

Environmental protection, Incorporation by reference, Reporting and recordkeeping requirements, Test procedures, Water pollution control.

Dated: August 7, 2017.

**E. Scott Pruitt,**  
*Administrator.*

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

**PART 136—GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS**

■ 1. The authority citation for part 136 continues to read as follows:

**Authority:** Secs. 301, 304(h), 307 and 501(a), Pub. L. 95–217, 91 Stat. 1566, *et seq.* (33 U.S.C. 1251, *et seq.*) (the Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977).

■ 2. Section 136.1 is amended by revising paragraph (a) to read as follows:

**§ 136.1 Applicability.**

(a) The procedures prescribed herein shall, except as noted in §§ 136.4, 136.5, and 136.6, be used to perform the measurements indicated whenever the waste constituent specified is required to be measured for:

(1) An application submitted to the Director and/or reports required to be submitted under NPDES permits or other requests for quantitative or qualitative effluent data under parts 122 through 125 of this chapter; and

(2) Reports required to be submitted by dischargers under the NPDES established by parts 124 and 125 of this chapter; and

(3) Certifications issued by States pursuant to section 401 of the Clean Water Act (CWA), as amended.

\* \* \* \* \*

■ 3. Section 136.2 is amended by revising paragraphs (d) and (f) to read as follows:

**§ 136.2 Definitions.**

\* \* \* \* \*

(d) *Director* means the director as defined in 40 CFR 122.2.

\* \* \* \* \*

(f) *Detection limit* means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is distinguishable from the method blank results as determined by the procedure set forth at appendix B of this part.

■ 4. In § 136.3:

■ a. Revise paragraph (a) introductory text and tables IA, IB, IC, ID, IF, IG, and IH.

■ b. Revise paragraphs (b) introductory text, (b)(8)(iv), (b)(8)(v), (b)(8)(xiii), (b)(8)(xv), (b)(10)(viii) through (lviii),

(b)(10)(lxi) through (lxiii), (b)(10)(lxviii), (b)(15)(v), (b)(15)(viii) through (x), (b)(15)(xii), (b)(15)(xiii), (b)(15)(xv) through (xxiv), (b)(15)(xxv), (b)(15)(xxvii), (b)(15)(xxix), (b)(15)(xlii), (b)(15)(li), (b)(15)(lii), (b)(15)(lv), (b)(15)(lviii), (b)(15)(lix), (b)(15)(lxi), (b)(15)(lxiv), (b)(15)(lxvi), and (b)(15)(lxviii).

■ c. Redesignate paragraphs (b)(19)(vii) and (viii) as paragraphs (b)(19)(ix) and (x), respectively.

■ d. Add new paragraphs (b)(19)(vii) and (viii).

■ e. Revise paragraphs (b)(20)(i) through (iv).

■ f. Remove paragraph (b)(20)(v).

■ g. Revise paragraph (b)(25)(i).

■ h. Add paragraphs (b)(25)(ii) and (iii).

■ i. Redesignate paragraphs (b)(33) and (34) as paragraphs (b)(35) and (36), respectively, and redesignate paragraphs (b)(26) through (32) as paragraphs (b)(27) through (33), respectively.

■ j. Add new paragraphs (b)(26) and (34).

■ k. Revise newly redesignated paragraph (b)(35).

■ l. Revise paragraph (c) and Table II in paragraph (e).

The revisions and additions read as follows:

**§ 136.3 Identification of test procedures.**

(a) Parameters or pollutants, for which methods are approved, are listed together with test procedure descriptions and references in Tables IA, IB, IC, ID, IE, IF, IG, and IH of this section. The methods listed in Tables IA, IB, IC, ID, IE, IF, IG, and IH are incorporated by reference, see paragraph (b) of this section, with the exception of EPA Methods 200.7, 601–613, 624.1, 625.1, 1613, 1624, and 1625. The full texts of Methods 601–613, 624.1, 625.1, 1613, 1624, and 1625 are printed in appendix A of this part, and the full text of Method 200.7 is printed in appendix C of this part. The full text for determining the method detection limit when using the test procedures is given in appendix B of this part. In the event of a conflict between the reporting requirements of 40 CFR parts 122 and 125 and any reporting requirements associated with the methods listed in these tables, the provisions of 40 CFR parts 122 and 125 are controlling and will determine a permittee's reporting requirements. The full texts of the referenced test procedures are incorporated by reference into Tables IA, IB, IC, ID, IE, IF, IG, and IH. The year after the method number indicates the latest editorial change of the method. The discharge parameter values for which reports are required must be

determined by one of the standard analytical test procedures incorporated by reference and described in Tables IA, IB, IC, ID, IE, IF, IG, and IH or by any alternate test procedure which has been approved by the Administrator under the provisions of paragraph (d) of this section and §§ 136.4 and 136.5. Under certain circumstances (paragraph (c) of this section, in § 136.5(a) through (d) or 40 CFR 401.13) other additional or alternate test procedures may be used.

TABLE IA—LIST OF APPROVED BIOLOGICAL METHODS FOR WASTEWATER AND SEWAGE SLUDGE

Parameter and units	Method <sup>1</sup>	EPA	Standard methods	AOAC, ASTM, USGS	Other
<b>Bacteria</b>					
1. Coliform (fecal), number per 100 mL or number per gram dry weight.	Most Probable Number (MPN), 5 tube, 3 dilution, or. Multiple tube/multiple well, or. Membrane filter (MF) <sup>2</sup> , single step.	p. 132, <sup>3</sup> 1680, <sup>11 15</sup> 1681 <sup>11 20</sup> .	9221 C E–2006.		
2. Coliform (fecal) in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or. MF <sup>2</sup> , single step <sup>5</sup> ....	p. 124 <sup>3</sup> .....	9222 D–2006 <sup>30</sup> .....	B–0050–85 <sup>4</sup> .	Colilert-18 <sup>®13 8 21 29</sup> .
3. Coliform (total), number per 100 mL .....	MPN, 5 tube, 3 dilution, or. MF <sup>2</sup> , single step or two step.	p. 132 <sup>3</sup> .....	9221 C E–2006.		
4. Coliform (total), in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or. MF <sup>2</sup> with enrichment <sup>5</sup> .	p. 124 <sup>3</sup> .....	9222 D–2006 <sup>30</sup> .		
5. <i>E. coli</i> , number per 100 mL <sup>21</sup> .....	MPN <sup>6 8 16</sup> multiple tube, or. multiple tube/multiple well, or. MF <sup>2 6 7 8</sup> single step	p. 114 <sup>3</sup> .....	9221 B–2006.		
6. Fecal streptococci, number per 100 mL ....	MPN, 5 tube, 3 dilution, or. MF <sup>2</sup> , or .....	p. 108 <sup>3</sup> .....	9222 B–2006 .....	B–0025–85 <sup>4</sup> .	
7. Enterococci, number per 100 mL <sup>21</sup> .....	Plate count .....	p. 114 <sup>3</sup> .....	9221 B–2006.		
8. <i>Salmonella</i> number per gram dry weight <sup>11</sup>	MPN, 5 tube, 3 dilution, or. MPN <sup>6 8</sup> , multiple tube/multiple well, or. MF <sup>2 6 7 8</sup> single step or. Plate count .....	p. 111 <sup>3</sup> .....	9222 B–2006.		
	MPN multiple tube ....	p. 136 <sup>3</sup> .....	9221B.2–2006/ 9221F–2006 <sup>12 14</sup> .	991.15 <sup>10</sup> .....	Colilert <sup>®</sup> 13 18. Colilert-18 <sup>®</sup> 13 17 18 mColiBlue-24 <sup>®19</sup> .
		p. 143 <sup>3</sup> .	9223 B–2004 <sup>13</sup> .....		
		p. 139 <sup>3</sup> .....	1603 <sup>22</sup> .....		
		p. 143 <sup>3</sup> .	9230 B–2007.		
		p. 139 <sup>3</sup> .....	p. 136 <sup>3</sup> .....	B–0055–85 <sup>4</sup> .....	
		1600 <sup>25</sup> .....	p. 143 <sup>3</sup> .		
		1682 <sup>23</sup> .	p. 139 <sup>3</sup> .....		
			9230 B–2007 .....		
			9230 D–2007 .....	D6503–99 <sup>9</sup> .....	Enterolert <sup>®</sup> 13 24.
			9230 C–2007 .....		
			9230 C–2007.		
<b>Aquatic Toxicity</b>					
9. Toxicity, acute, fresh water organisms, LC <sub>50</sub> , percent effluent.	<i>Ceriodaphnia dubia</i> acute. <i>Daphnia pulex</i> and <i>Daphnia magna</i> acute. Fathead Minnow, <i>Pimephales promelas</i> , and Bannerfin shiner, <i>Cyprinella leedsii</i> , acute. Rainbow Trout, <i>Oncorhynchus mykiss</i> , and brook trout, <i>Salvelinus fontinalis</i> , acute.	2002.0 <sup>26</sup> . 2021.0 <sup>26</sup> . 2000.0 <sup>26</sup> . 2019.0 <sup>26</sup> .			
10. Toxicity, acute, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, LC <sub>50</sub> , percent effluent.	Mysid, <i>Mysidopsis bahia</i> , acute. Sheepshead Minnow, <i>Cyprinodon variegatus</i> , acute. Silverside, <i>Menidia beryllina</i> , <i>Menidia menidia</i> , and <i>Menidia peninsulae</i> , acute.	2007.0 <sup>26</sup> . 2004.0 <sup>26</sup> . 2006.0 <sup>26</sup> .			
11. Toxicity, chronic, fresh water organisms, NOEC or IC <sub>25</sub> , percent effluent.	Fathead minnow, <i>Pimephales promelas</i> , larval survival and growth.	1000.0 <sup>27</sup> .			

TABLE IA—LIST OF APPROVED BIOLOGICAL METHODS FOR WASTEWATER AND SEWAGE SLUDGE—Continued

Parameter and units	Method <sup>1</sup>	EPA	Standard methods	AOAC, ASTM, USGS	Other
12. Toxicity, chronic, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, NOEC or IC <sub>25</sub> , percent effluent.	Fathead minnow, <i>Pimephales promelas</i> , embryo-larval survival and teratogenicity.	1001.0 <sup>27</sup> .			
	Daphnia, <i>Ceriodaphnia dubia</i> , survival and reproduction.	1002.0 <sup>27</sup> .			
	Green alga, <i>Selenastrum capricornutum</i> , growth.	1003.0 <sup>27</sup> .			
	Sheepshead minnow, <i>Cyprinodon variegatus</i> , larval survival and growth.	1004.0 <sup>28</sup> .			
	Sheepshead minnow, <i>Cyprinodon variegatus</i> , embryo-larval survival and teratogenicity.	1005.0 <sup>28</sup> .			
	Inland silverside, <i>Menidia beryllina</i> , larval survival and growth.	1006.0 <sup>28</sup> .			
	Mysid, <i>Mysidopsis bahia</i> , survival, growth, and fecundity.	1007.0 <sup>28</sup> .			
	Sea urchin, <i>Arbacia punctulata</i> , fertilization.	1008.0 <sup>28</sup> .			

**Table IA notes:**

- <sup>1</sup> The method must be specified when results are reported.
- <sup>2</sup> A 0.45-µm membrane filter (MF) or other pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with their growth.
- <sup>3</sup> Microbiological Methods for Monitoring the Environment, Water, and Wastes, EPA/600/8-78/017. 1978. U.S. EPA.
- <sup>4</sup> U.S. Geological Survey Techniques of Water-Resource Investigations, Book 5, Laboratory Analysis, Chapter A4, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples. 1989. USGS.
- <sup>5</sup> Because the MF technique usually yields low and variable recovery from chlorinated wastewaters, the Most Probable Number method will be required to resolve any controversies.
- <sup>6</sup> Tests must be conducted to provide organism enumeration (density). Select the appropriate configuration of tubes/filtrations and dilutions/volumes to account for the quality, character, consistency, and anticipated organism density of the water sample.
- <sup>7</sup> When the MF method has been used previously to test waters with high turbidity, large numbers of noncoliform bacteria, or samples that may contain organisms stressed by chlorine, a parallel test should be conducted with a multiple-tube technique to demonstrate applicability and comparability of results.
- <sup>8</sup> To assess the comparability of results obtained with individual methods, it is suggested that side-by-side tests be conducted across seasons of the year with the water samples routinely tested in accordance with the most current Standard Methods for the Examination of Water and Wastewater or EPA alternate test procedure (ATP) guidelines.
- <sup>9</sup> Annual Book of ASTM Standards-Water and Environmental Technology, Section 11.02. 2000, 1999, 1996. ASTM International.
- <sup>10</sup> Official Methods of Analysis of AOAC International. 16th Edition, 4th Revision, 1998. AOAC International.
- <sup>11</sup> Approved for enumeration of target organism in sewage sludge.
- <sup>12</sup> The multiple-tube fermentation test is used in 9221B.2-2006. Lactose broth may be used in lieu of lauryl tryptose broth (LTB), if at least 25 parallel tests are conducted between this broth and LTB using the water samples normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform using lactose broth is less than 10 percent. No requirement exists to run the completed phase on 10 percent of all total coliform-positive tubes on a seasonal basis.
- <sup>13</sup> These tests are collectively known as defined enzyme substrate tests, where, for example, a substrate is used to detect the enzyme β-glucuronidase produced by *E. coli*.
- <sup>14</sup> After prior enrichment in a presumptive medium for total coliform using 9221B.2-2006, all presumptive tubes or bottles showing any amount of gas, growth or acidity within 48 h ± 3 h of incubation shall be submitted to 9221F-2006. Commercially available EC-MUG media or EC media supplemented in the laboratory with 50 µg/mL of MUG may be used.
- <sup>15</sup> Method 1680: Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple-Tube Fermentation Using Lauryl-Tryptose Broth (LTB) and EC Medium, EPA-821-R-14-009. September 2014. U.S. EPA.
- <sup>16</sup> Samples shall be enumerated by the multiple-tube or multiple-well procedure. Using multiple-tube procedures, employ an appropriate tube and dilution configuration of the sample as needed and report the Most Probable Number (MPN). Samples tested with Colilert® may be enumerated with the multiple-well procedures, Quanti-Tray® and the MPN calculated from the table provided by the manufacturer.
- <sup>17</sup> Colilert-18® is an optimized formulation of the Colilert® for the determination of total coliforms and *E. coli* that provides results within 18 h of incubation at 35°C rather than the 24 h required for the Colilert® test and is recommended for marine water samples.
- <sup>18</sup> Descriptions of the Colilert®, Colilert-18®, and Quanti-Tray® may be obtained from IDEXX Laboratories, Inc.
- <sup>19</sup> A description of the mColiBlue24® test, is available from Hach Company.
- <sup>20</sup> Method 1681: Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple-Tube Fermentation using A-1 Medium, EPA-821-R-06-013. July 2006. U.S. EPA.
- <sup>21</sup> Approved for enumeration of target organism in wastewater effluent.
- <sup>22</sup> Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (modified mTEC), EPA-821-R-14-010. September 2014. U.S. EPA.
- <sup>23</sup> Method 1682: *Salmonella* in Sewage Sludge (Biosolids) by Modified Semisolid Rappaport-Vassiliadis (MSRV) Medium, EPA-821-R-14-012. September 2014. U.S. EPA.
- <sup>24</sup> A description of the Enterolert® test may be obtained from IDEXX Laboratories Inc.
- <sup>25</sup> Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-β-D-Glucoside Agar (mEI), EPA-821-R-14-011. September 2014. U.S. EPA.
- <sup>26</sup> Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012. Fifth Edition, October 2002. U.S. EPA.
- <sup>27</sup> Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA-821-R-02-013. Fourth Edition, October 2002. U.S. EPA.
- <sup>28</sup> Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA-821-R-02-014. Third Edition, October 2002. U.S. EPA.
- <sup>29</sup> To use Colilert-18® to assay for fecal coliforms, the incubation temperature is 44.5 ± 0.2 °C, and a water bath incubator is used.

<sup>30</sup>On a monthly basis, at least ten blue colonies from the medium must be verified using Lauryl Tryptose Broth and EC broth, followed by count adjustment based on these results; and representative non-blue colonies should be verified using Lauryl Tryptose Broth. Where possible, verifications should be done from randomized sample sources.

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
1. Acidity, as CaCO <sub>3</sub> , mg/L.	Electrometric endpoint or phenolphthalein endpoint.	.....	2310 B–2011 .....	D1067–11 .....	I–1020–85. <sup>2</sup>
2. Alkalinity, as CaCO <sub>3</sub> , mg/L.	Electrometric or Colorimetric titration to pH 4.5, Manual.	.....	2320 B–2011 .....	D1067–11 .....	973.43, <sup>3</sup> I–1030–85. <sup>2</sup>
3. Aluminum—Total, <sup>4</sup> mg/L.	Automatic .....	310.2 (Rev. 1974) <sup>1</sup> .....	.....	.....	I–2030–85. <sup>2</sup>
	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> .....	.....	3111 D–2011 or 3111 E–2011. 3113 B–2010.	.....	I–3051–85. <sup>2</sup>
	AA furnace .....	.....	.....	.....	.....
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
4. Ammonia (as N), mg/L	Direct Current Plasma (DCP) <sup>36</sup> .	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Colorimetric (Eriochrome cyanine R).	.....	3500-Al B–2011.	.....	.....
	Manual distillation <sup>6</sup> or gas diffusion (pH > 11), followed by any of the following:	350.1, Rev. 2.0 (1993) ...	4500–NH <sub>3</sub> B–2011 .....	.....	973.49. <sup>3</sup>
	Nesslerization .....	.....	.....	D1426–08 (A) .....	973.49, <sup>3</sup> I–3520–85. <sup>2</sup>
	Titration .....	.....	4500–NH <sub>3</sub> C–2011.	.....	.....
	Electrode .....	.....	4500–NH <sub>3</sub> D–2011 or E–2011.	D1426–08 (B).	.....
	Manual phenate, salicylate, or other substituted phenols in Berthelot reaction based methods.	.....	4500–NH <sub>3</sub> F–2011 .....	.....	See footnote. <sup>60</sup>
	Automated phenate, salicylate, or other substituted phenols in Berthelot reaction based methods.	350.1, <sup>30</sup> Rev. 2.0 (1993)	4500–NH <sub>3</sub> G–2011, 4500–NH <sub>3</sub> H–2011.	.....	I–4523–85. <sup>2</sup>
	Automated electrode .....	.....	.....	.....	See footnote. <sup>7</sup>
	Ion Chromatography .....	.....	.....	D6919–09.	.....
Automated gas diffusion, followed by conductivity cell analysis.	.....	.....	.....	Timberline Ammonia-001. <sup>74</sup>	
5. Antimony—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> .....	.....	3111 B–2011. 3113 B–2010.	.....	.....
6. Arsenic—Total, <sup>4</sup> mg/L ....	AA furnace .....	.....	.....	.....	.....
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
7. Barium—Total, <sup>4</sup> mg/L ..	Digestion, <sup>4</sup> followed by any of the following: AA gaseous hydride .....	.....	3114 B–2011 or 3114 C–2011. 3113 B–2010 .....	D2972–08 (B) .....	I–3062–85. <sup>2</sup>
	AA furnace .....	.....	.....	D2972–08 (C) .....	I–4063–98. <sup>49</sup>
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12.	.....
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4020–05. <sup>70</sup>
	Colorimetric (SDDC) .....	.....	3500-As B–2011 .....	D2972–08 (A) .....	I–3060–85. <sup>2</sup>
8. Beryllium—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> .....	.....	3111 D–2011 .....	.....	I–3084–85. <sup>2</sup>
	AA furnace .....	.....	3113 B–2010 .....	D4382–12.	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	.....	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
	DCP <sup>36</sup> .....	.....	.....	.....	See footnote. <sup>34</sup>
8. Beryllium—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 D–2011 or 3111 E–2011. 3113 B–2010 .....	D3645–08 (A) .....	I–3095–85. <sup>2</sup>
	AA furnace .....	.....	.....	D3645–08 (B).	.....
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
9. Biochemical oxygen demand (BOD <sub>5</sub> ), mg/L.	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97, <sup>50</sup>
	DCP .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Colorimetric (aluminum) .. Dissolved Oxygen Deple- tion.	.....	.....	See footnote. <sup>61</sup> 5210 B–2011 .....	.....
10. Boron—Total, <sup>37</sup> mg/L	Colorimetric (curcumin) ..	.....	4500-B B–2011 .....	.....	I–3112–85, <sup>2</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97, <sup>50</sup>
11. Bromide, mg/L .....	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97, <sup>50</sup>
	DCP .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Electrode .....	.....	.....	D1246–10 .....	I–1125–85, <sup>2</sup>
	Ion Chromatography .....	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B–2011, C–2011, D–2011.	D4327–03 .....	993.30. <sup>3</sup>
12. Cadmium—Total, <sup>4</sup> mg/L.	CIE/UV .....	.....	4140 B–2011 .....	D6508–10 .....	D6508, Rev. 2. <sup>54</sup>
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration <sup>36</sup> ...	.....	3111 B–2011 or 3111 C– 2011.	D3557–12 (A or B) .....	974.27, <sup>3</sup> p. 37, <sup>9</sup> I–3135– 85 <sup>2</sup> or I–3136–85, <sup>2</sup>
	AA furnace .....	.....	3113 B–2010 .....	D3557–12 (D) .....	I–4138–89. <sup>51</sup>
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D1976–12 .....	I–1472–85 <sup>2</sup> or I–4471– 97, <sup>50</sup>
13. Calcium—Total, <sup>4</sup> mg/L	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97, <sup>50</sup>
	DCP <sup>36</sup> .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Voltametry <sup>11</sup> .....	.....	.....	D3557–12 (C).	.....
	Colorimetric (Dithizone) ..	.....	3500-Cd-D-1990.	.....	.....
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration .....	.....	3111 B–2011 .....	D511–09(B) .....	I–3152–85, <sup>2</sup>
14. Carbonaceous bio- chemical oxygen dem- and (CBOD <sub>5</sub> ), mg/L <sup>12</sup> .	ICP/AES .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D3120 B–2011 .....	I–4471–97, <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4471–97, <sup>50</sup>
	DCP .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Voltametry <sup>11</sup> .....	.....	.....	D3557–12 (C).	.....
	Colorimetric (Dithizone) ..	.....	3500-Cd-D-1990.	.....	.....
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
15. Chemical oxygen dem- and (COD), mg/L.	AA direct aspiration .....	.....	3111 B–2011 .....	D511–09(B) .....	I–3152–85, <sup>2</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011 .....	D3120 B–2011 .....	I–4471–97, <sup>50</sup>
16. Chloride, mg/L .....	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup>
	DCP .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>
	Titrimetric (EDTA) .....	.....	3500-Ca B–2011 .....	D511–09 (A).	.....
	Ion Chromatography .....	.....	.....	D6919–09.	.....
	Dissolved Oxygen Deple- tion with nitrification in- hibitor.	.....	5210 B–2011 .....	.....	See footnote. <sup>35</sup> <sup>63</sup>
	Titrimetric .....	410.3 (Rev. 1978) <sup>1</sup> .....	5220 B–2011 or C–2011	D1252–06 (A) .....	973.46, <sup>3</sup> p. 17, <sup>9</sup> I–3560– 85, <sup>2</sup>
17. Chlorine—Total resid- ual, mg/L.	Spectrophotometric, manual or automatic.	410.4, Rev. 2.0 (1993) ...	5220 D–2011 .....	D1252–06 (B) .....	See footnotes. <sup>13</sup> <sup>14</sup> , I– 3561–85, <sup>2</sup>
	Titrimetric: (silver nitrate)	.....	4500-Cl– B–2011 .....	D512–04 (B) .....	I–1183–85, <sup>2</sup>
	(Mercuric nitrate) .....	.....	4500-Cl– C–2011 .....	D512–04 (A) .....	973.51, <sup>3</sup> I–1184–85, <sup>2</sup>
	Colorimetric: Manual .....	.....	.....	.....	I–1187–85, <sup>2</sup>
	Automated (ferricyanide)	.....	4500-Cl– E–2011 .....	.....	I–2187–85, <sup>2</sup>
	Potentiometric Titration ..	.....	4500-Cl– D–2011.	.....	.....
	Ion Selective Electrode ..	.....	.....	D512–04 (C).	.....
	Ion Chromatography .....	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B–2011 or 4110 C– 2011.	D4327–03 .....	993.30, <sup>3</sup> I–2057–90, <sup>51</sup>
	CIE/UV .....	.....	4140 B–2011 .....	D6508–10 .....	D6508, Rev. 2. <sup>54</sup>
	Amperometric direct .....	.....	4500-Cl D–2011 .....	D1253–08.	.....
17A. Chlorine-Free Avail- able, mg/L.	Amperometric direct (low level).	.....	4500-Cl E–2011.	.....	.....
	Iodometric direct .....	.....	4500-Cl B–2011.	.....	.....
	Back titration ether end- point <sup>15</sup> .	.....	4500-Cl C–2011.	.....	.....
	DPD–FAS .....	.....	4500-Cl F–2011.	.....	.....
	Spectrophotometric, DPD	.....	4500-Cl G–2011.	.....	.....
	Electrode .....	.....	.....	.....	See footnote. <sup>16</sup>
18. Chromium VI dis- solved, mg/L.	Amperometric direct .....	.....	4500-Cl D–2011 .....	D1253–08.	.....
	Amperometric direct (low level).	.....	4500-Cl E–2011.	.....	.....
	DPD–FAS .....	.....	4500-Cl F–2011.	.....	.....
	Spectrophotometric, DPD	.....	4500-Cl G–2011.	.....	.....
19. Chromium—Total, <sup>4</sup> mg/L.	0.45-micron filtration fol- lowed by any of the following:	.....	.....	.....	.....
	AA chelation-extraction ..	.....	3111 C–2011 .....	.....	I–1232–85, <sup>2</sup>
	Ion Chromatography .....	218.6, Rev. 3.3 (1994) ...	3500-Cr C–2011 .....	D5257–11 .....	993.23. <sup>3</sup>
19. Chromium—Total, <sup>4</sup> mg/L.	Colorimetric (diphenyl- carbazine).	.....	3500-Cr B–2011 .....	D1687–12 (A) .....	I–1230–85, <sup>2</sup>
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration <sup>36</sup> ...	.....	3111 B–2011 .....	D1687–12 (B) .....	974.27, <sup>3</sup> I–3236–85, <sup>2</sup>
	AA chelation-extraction ..	.....	3111 C–2011.	.....	.....
AA furnace .....	.....	3113 B–2010 .....	D1687–12 (C) .....	I–3233–93. <sup>46</sup>	

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other	
20. Cobalt—Total, <sup>4</sup> mg/L	STGFAA .....	200.9, Rev. 2.2 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>	
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).				
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4020–05. <sup>70</sup>	
	DCP <sup>36</sup> .....	.....	.....	D4190–08 .....	See footnote. <sup>34</sup>	
	Colorimetric (diphenyl-carbazide). Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	.....	3500-Cr B–2011.	.....	.....
21. Color, platinum cobalt units or dominant wavelength, hue, luminance purity.	AA furnace .....	.....	3111 B–2011 or 3111 C–2011.	D3558–08 (A or B) .....	p. 37, <sup>9</sup> I–3239–85. <sup>2</sup>	
	AA furnace .....	.....	3113 B–2010 .....	D3558–08 (C) .....	I–4243–89. <sup>51</sup>	
	STGFAA .....	200.9, Rev. 2.2 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>	
	ICP/AES <sup>36</sup> .....	200.7, Rev. 4.4 (1994) ...	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4020–05. <sup>70</sup>	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	.....	D4190–08 .....	See footnote. <sup>34</sup>	
22. Copper—Total, <sup>4</sup> mg/L	DCP .....	.....	2120 F–2011 <sup>78</sup> .	.....	.....	
	Colorimetric (ADMI) .....	.....	.....	.....	.....	
	Platinum cobalt visual comparison.	.....	2120 B–2011 .....	.....	I–1250–85. <sup>2</sup>	
	Spectrophotometric .....	.....	.....	.....	See footnote. <sup>18</sup>	
	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> .....	.....	.....	.....	.....	.....
23. Cyanide—Total, mg/L	AA furnace .....	.....	3111 B–2011 or 3111 C–2011.	D1688–12 (A or B) .....	974.27, <sup>3</sup> p. 37, <sup>9</sup> I–3270–85 <sup>2</sup> or I–3271–85. <sup>2</sup>	
	AA furnace .....	.....	3113 B–2010 .....	D1688–12 (C) .....	I–4274–89. <sup>51</sup>	
	STGFAA .....	200.9, Rev. 2.2 (1994).	3120 B–2011 .....	D1976–12 .....	I–4471–97. <sup>50</sup>	
	ICP/AES <sup>36</sup> .....	200.5, Rev 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3125 B–2011 .....	D5673–10 .....	993.14, <sup>3</sup> I–4020–05. <sup>70</sup>	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	.....	D4190–08 .....	See footnote. <sup>34</sup>	
	DCP <sup>36</sup> .....	.....	.....	.....	.....	
	Colorimetric (Neocuproine).	.....	3500-Cu B–2011.	.....	.....	
	Colorimetric (Bathocuproine).	.....	3500-Cu C–2011 .....	.....	See footnote. <sup>19</sup>	
	Automated UV digestion/distillation and Colorimetry.	.....	.....	.....	Kelada-01. <sup>55</sup>	
	Segmented Flow Injection, In-Line Ultraviolet Digestion, followed by gas diffusion amperometry.	.....	.....	.....	D7511–12.	
24. Cyanide—Available, mg/L.	Manual distillation with MgCl <sub>2</sub> , followed by any of the following: Flow Injection, gas diffusion amperometry.	335.4, Rev. 1.0 (1993) <sup>57</sup>	4500-CN <sup>-</sup> B–2011 and C–2011.	D2036–09(A), D7284–13	10–204–00–1–X. <sup>56</sup>	
	Flow Injection, gas diffusion amperometry.	.....	.....	D2036–09(A) D7284–13.	.....	
	Titrimetric .....	.....	4500-CN <sup>-</sup> D–2011 .....	D2036–09(A) .....	p. 22. <sup>9</sup>	
	Spectrophotometric, manual.	.....	4500-CN <sup>-</sup> E–2011 .....	D2036–09(A) .....	I–3300–85. <sup>2</sup>	
	Semi-Automated <sup>20</sup> .....	335.4, Rev. 1.0 (1993) <sup>57</sup>	.....	.....	10–204–00–1–X, <sup>56</sup> I–4302–85. <sup>2</sup>	
	Ion Chromatography .....	.....	.....	D2036–09(A).	.....	
	Ion Selective Electrode ..	.....	.....	4500-CN <sup>-</sup> F–2011 .....	D2036–09(A).	.....
	Cyanide Amenable to Chlorination (CATC); Manual distillation with MgCl <sub>2</sub> , followed by Titrimetric or Spectrophotometric.	.....	.....	4500-CN <sup>-</sup> G–2011 .....	D2036–09(B).	.....
	Flow injection and ligand exchange, followed by gas diffusion amperometry <sup>59</sup> .	.....	.....	.....	D6888–09 .....	OIA–1677–09. <sup>44</sup>
	Automated Distillation and Colorimetry (no UV digestion).	.....	.....	.....	.....	Kelada-01. <sup>55</sup>
24.A Cyanide—Free, mg/L.	Flow Injection, followed by gas diffusion amperometry.	.....	.....	D7237–10 .....	OIA–1677–09. <sup>44</sup>	
	Manual micro-diffusion and colorimetry.	.....	.....	D4282–02.	.....	
25. Fluoride—Total, mg/L	Manual distillation, <sup>6</sup> followed by any of the following: Electrode, manual .....	.....	4500-F <sup>-</sup> B–2011.	.....	.....	
	Electrode, automated .....	.....	4500-F <sup>-</sup> C–2011 .....	D1179–10 (B).	.....	
	Colorimetric, (SPADNS)	.....	4500-F <sup>-</sup> D–2011 .....	D1179–10 (A).	I–4327–85. <sup>2</sup>	

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
26. Gold—Total, <sup>4</sup> mg/L	Automated complexone Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4500-F <sup>-</sup> E-2011. 4110 B-2011 or C-2011	D4327-03	993.30. <sup>3</sup>
	CIE/UV Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration AA furnace ICP/MS DCP	3111 B-2011. 231.2 (Issued 1978) <sup>1</sup> 200.8, Rev. 5.4 (1994)	4140 B-2011 3111 B-2011. 3113 B-2010. 3125 B-2011	D6508-10 D5673-10	D6508, Rev. 2. <sup>54</sup> 993.14. <sup>3</sup> See footnote. <sup>34</sup>
27. Hardness—Total, as CaCO <sub>3</sub> , mg/L.	Automated colorimetric	130.1 (Issued 1971) <sup>1</sup> .			
	Titrimetric (EDTA) Ca plus Mg as their carbonates, by any approved method for Ca and Mg (See Parameters 13 and 33), provided that the sum of the lowest point of quantitation for Ca and Mg is below the NPDES permit requirement for Hardness.		2340 C-2011 2340 B-2011.	D1126-12	973.52B, <sup>3</sup> I-1338-85. <sup>2</sup>
28. Hydrogen ion (pH), pH units.	Electrometric measurement.		4500-H+ B-2011	D1293-99 (A or B)	973.41, <sup>3</sup> I-1586-85. <sup>2</sup>
	Automated electrode	150.2 (Dec. 1982) <sup>1</sup>			See footnote, <sup>21</sup> I-2587-85. <sup>2</sup>
29. Iridium—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration AA furnace	3111 B-2011. 235.2 (Issued 1978) <sup>1</sup> .	3111 B-2011.		
	ICP/MS		3125 B-2011.		
30. Iron—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup>		3111 B-2011 or 3111 C-2011. 3113 B-2010	D1068-10 (A) D1068-10 (B).	974.27, <sup>3</sup> I-3381-85. <sup>2</sup>
	AA furnace STGFAA ICP/AES <sup>36</sup>	200.9, Rev. 2.2 (1994). 200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B-2011	D1976-12	I-4471-97. <sup>50</sup>
31. Kjeldahl Nitrogen <sup>5-</sup> Total, (as N), mg/L.	ICP/MS DCP <sup>36</sup> Colorimetric (Phenanthroline).	200.8, Rev. 5.4 (1994)	3125 B-2011 3500-Fe B-2011	D5673-10 D4190-08 D1068-10 (C)	993.14. <sup>3</sup> See footnote. <sup>34</sup> See footnote. <sup>22</sup>
	Manual digestion <sup>20</sup> and distillation or gas diffusion, followed by any of the following: Titration Nesslerization Electrode Semi-automated phenate Manual phenate, salicylate, or other substituted phenols in Berthelot reaction based methods. Automated gas diffusion, followed by conductivity cell analysis.		4500-N <sub>org</sub> B-2011 or C-2011 and 4500-NH <sub>3</sub> B-2011. 4500-NH <sub>3</sub> C-2011 4500-NH <sub>3</sub> D-2011 or E-2011. 4500-NH <sub>3</sub> G-2011 4500-NH <sub>3</sub> H-2011. 4500-NH <sub>3</sub> F-2011	D3590-11 (A) D1426-08 (A). D1426-08 (B).	I-4515-91. <sup>45</sup> 973.48. <sup>3</sup> See footnote. <sup>60</sup>
Automated Methods for TKN that do not require manual distillation.					
	Automated phenate, salicylate, or other substituted phenols in Berthelot reaction based methods colorimetric (auto digestion and distillation).	351.1 (Rev. 1978) <sup>1</sup>			I-4551-78. <sup>8</sup>
	Semi-automated block digester colorimetric (distillation not required).	351.2, Rev. 2.0 (1993)	4500-N <sub>org</sub> D-2011	D3590-11 (B)	I-4515-91. <sup>45</sup>
	Block digester, followed by Auto distillation and Titration.				See footnote. <sup>39</sup>

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
	Block digester, followed by Auto distillation and Nesslerization.	.....	.....	.....	See footnote. <sup>40</sup>
	Block Digester, followed by Flow injection gas diffusion (distillation not required).	.....	.....	.....	See footnote. <sup>41</sup>
	Digestion with peroxodisulfate, followed by Spectrophotometric (2,6-dimethyl phenol).	.....	.....	.....	Hach 10242. <sup>76</sup>
	Digestion with persulfate, followed by Colorimetric.	.....	.....	.....	NCASI TNTP W10900. <sup>77</sup>
32. Lead—Total, <sup>4</sup> mg/L ...	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> ...	.....	3111 B–2011 or 3111 C–2011. 3113 B–2010	D3559–08 (A or B) ..... D3559–08 (D) .....	974.27, <sup>3</sup> I–3399–85. <sup>2</sup> I–4403–89. <sup>51</sup>
	AA furnace .....	.....	.....	.....	.....
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011	D1976–12	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011	D5673–10	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
	DCP <sup>36</sup> .....	.....	.....	D4190–08	See footnote. <sup>34</sup>
	Voltametry <sup>11</sup> .....	.....	.....	D3559–08 (C).	.....
	Colorimetric (Dithizone) ..	.....	3500-Pb B–2011.	.....	.....
33. Magnesium—Total, <sup>4</sup> mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B–2011	D511–09 (B) .....	974.27, <sup>3</sup> I–3447–85. <sup>2</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011	D1976–12	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011	D5673–10	993.14. <sup>3</sup>
	DCP .....	.....	.....	.....	See footnote. <sup>34</sup>
	Ion Chromatography .....	.....	.....	D6919–09.	.....
34. Manganese—Total, <sup>4</sup> mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> ...	.....	3111 B–2011	D858–12 (A or B) .....	974.27, <sup>3</sup> I–3454–85. <sup>2</sup>
	AA furnace .....	.....	3113 B–2010	D858–12 (C).	.....
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011	D1976–12	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011	D5673–10	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
	DCP <sup>36</sup> .....	.....	.....	D4190–08	See footnote. <sup>34</sup>
	Colorimetric (Persulfate) ..	.....	3500-Mn B–2011	.....	920.203. <sup>3</sup>
	Colorimetric (Periodate) ..	.....	.....	.....	See footnote. <sup>23</sup>
35. Mercury—Total, <sup>4</sup> mg/L	Cold vapor, Manual .....	245.1, Rev. 3.0 (1994) ...	3112 B–2011	D3223–12	977.22, <sup>3</sup> I–3462–85. <sup>2</sup>
	Cold vapor, Automated ..	245.2 (Issued 1974) <sup>1</sup> .	.....	.....	.....
	Cold vapor atomic fluorescence spectrometry (CVAFS).	245.7 Rev. 2.0 (2005) <sup>17</sup>	.....	.....	I–4464–01. <sup>71</sup>
	Purge and Trap CVAFS	1631E <sup>43</sup> .	.....	.....	.....
36. Molybdenum—Total, <sup>4</sup> mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 D–2011	.....	I–3490–85. <sup>2</sup>
	AA furnace .....	.....	3113 B–2010	.....	I–3492–96. <sup>47</sup>
	ICP/AES <sup>36</sup> .....	200.7, Rev. 4.4 (1994) ...	3120 B–2011	D1976–12	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011	D5673–10	993.14, <sup>3</sup> I–4471–97. <sup>50</sup>
	DCP .....	.....	.....	.....	See footnote. <sup>34</sup>
37. Nickel—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration <sup>36</sup> ...	.....	3111 B–2011 or 3111 C–2011.	D1886–08 (A or B) .....	I–3499–85. <sup>2</sup>
	AA furnace .....	.....	3113 B–2010	D1886–08 (C) .....	I–4503–89. <sup>51</sup>
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	.....
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B–2011	D1976–12	I–4471–97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B–2011	D5673–10	993.14, <sup>3</sup> I–4020–05. <sup>70</sup>
	DCP <sup>36</sup> .....	.....	.....	D4190–08	See footnote. <sup>34</sup>
38. Nitrate (as N), mg/L ...	Ion Chromatography .....	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B–2011 or C–2011	D4327–03	993.30. <sup>3</sup>
	CIE/UV .....	.....	4140 B–2011	D6508–10	D6508, Rev. 2. <sup>54</sup>
	Ion Selective Electrode ..	.....	4500–NO <sub>3</sub> <sup>–</sup> D–2011.	.....	973.50, <sup>3</sup> 419D1, <sup>7</sup> p. 28. <sup>9</sup>
	Colorimetric (Brucine sulfate).	352.1 (Issued 1971) <sup>1</sup>	.....	.....	.....
	Spectrophotometric (2,6-dimethylphenol).	.....	.....	.....	Hach 10206. <sup>75</sup>
	Nitrate-nitrite N minus Nitrite N (See parameters 39 and 40).	.....	.....	.....	.....
39. Nitrate-nitrite (as N), mg/L.	Cadmium reduction, Manual.	.....	4500–NO <sub>3</sub> <sup>–</sup> E–2011	D3867–04 (B).	.....

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
40. Nitrite (as N), mg/L	Cadmium reduction, Automated.	353.2, Rev. 2.0 (1993) ...	4500-NO <sub>3</sub> <sup>-</sup> F-2011 .....	D3867-04 (A) .....	I-2545-90. <sup>51</sup>
	Automated hydrazine Reduction/Colorimetric	.....	4500-NO <sub>3</sub> <sup>-</sup> H-2011.	.....	See footnote. <sup>62</sup>
	Ion Chromatography	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B-2011 or C-2011	D4327-03 .....	993.30. <sup>3</sup>
	CIE/UV	.....	4140 B-2011 .....	D6508-10 .....	D6508, Rev. 2. <sup>54</sup>
	Enzymatic reduction, followed by automated colorimetric determination.	.....	.....	.....	I-2547-11, <sup>72</sup> I-2548-11, <sup>72</sup> N07-0003. <sup>73</sup>
	Spectrophotometric (2,6-dimethylphenol).	.....	.....	.....	Hach 10206. <sup>75</sup>
	Spectrophotometric: Manual.	.....	4500-NO <sub>2</sub> <sup>-</sup> B-2011 .....	.....	See footnote. <sup>25</sup>
	Automated (Diazotization).	.....	.....	.....	I-4540-85, <sup>2</sup> See footnote. <sup>62</sup>
	Automated (*bypass cadmium reduction).	353.2, Rev. 2.0 (1993) ...	4500-NO <sub>3</sub> <sup>-</sup> F-2011 .....	D3867-04 (A) .....	I-4545-85. <sup>2</sup>
	Manual (*bypass cadmium reduction).	.....	4500-NO <sub>3</sub> <sup>-</sup> E-2011 .....	D3867-04 (B).	.....
Ion Chromatography	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B-2011 or C-2011	D4327-03 .....	993.30. <sup>3</sup>	
41. Oil and grease—Total recoverable, mg/L.	CIE/UV	.....	4140 B-2011 .....	D6508-10 .....	D6508, Rev. 2. <sup>54</sup>
	Automated (*bypass Enzymatic reduction).	.....	.....	.....	I-2547-11, <sup>72</sup> I-2548-11, <sup>72</sup> N07-0003. <sup>73</sup>
	Hexane extractable material (HEM): n-Hexane extraction and gravimetry.	1664 Rev. A; 1664 Rev. B <sup>42</sup> .	5520 B-2011 <sup>38</sup> .	.....	.....
42. Organic carbon—Total (TOC), mg/L.	Silica gel treated HEM (SGT-HEM): Silica gel treatment and gravimetry.	1664 Rev. A; 1664 Rev. B <sup>42</sup> .	5520 B-2011 <sup>38</sup> and 5520 F-2011 <sup>38</sup> .	.....	.....
	Combustion	.....	5310 B-2011 .....	D7573-09 .....	973.47, <sup>3</sup> p. 14. <sup>24</sup>
43. Organic nitrogen (as N), mg/L.	Heated persulfate or UV persulfate oxidation.	.....	5310 C-2011, 5310 D-2011.	D4839-03 .....	973.47, <sup>3</sup> p. 14. <sup>24</sup>
	Total Kjeldahl N (Parameter 31) minus ammonia N (Parameter 4).	.....	.....	.....	.....
44. Ortho-phosphate (as P), mg/L.	Ascorbic acid method: Automated	365.1, Rev. 2.0 (1993) ...	4500-P F-2011 or G-2011.	.....	973.56, <sup>3</sup> I-4601-85. <sup>2</sup>
	Manual single reagent	.....	4500-P E-2011 .....	D515-88 (A) .....	973.55. <sup>3</sup>
	Manual two reagent	365.3 (Issued 1978) <sup>1</sup> .	.....	.....	.....
45. Osmium—Total, <sup>4</sup> mg/L.	Ion Chromatography	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B-2011 or C-2011	D4327-03 .....	993.30. <sup>3</sup>
	CIE/UV	.....	4140 B-2011 .....	D6508-10 .....	D6508, Rev. 2. <sup>54</sup>
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration	.....	3111 D-2011.	.....	.....
46. Oxygen, dissolved, mg/L.	AA furnace	252.2 (Issued 1978) <sup>1</sup> .	.....	.....	.....
	Winkler (Azide modification).	.....	4500-O (B-F)-2011 .....	D888-09 (A) .....	973.45B, <sup>3</sup> I-1575-78. <sup>8</sup>
	Electrode	.....	4500-O G-2011 .....	D888-09 (B) .....	I-1576-78. <sup>8</sup>
47. Palladium—Total, <sup>4</sup> mg/L.	Luminescence Based Sensor.	.....	.....	D888-09 (C) .....	See footnote. <sup>63</sup> See footnote. <sup>64</sup>
	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration	.....	3111 B-2011.	.....	.....
	AA furnace	253.2 (Issued 1978) <sup>1</sup> .	.....	.....	.....
	ICP/MS	.....	3125 B-2011.	.....	.....
48. Phenols, mg/L	DCP	.....	.....	.....	See footnote. <sup>34</sup>
	Manual distillation, <sup>26</sup> followed by any of the following:	420.1 (Rev. 1978) <sup>1</sup> .....	5530 B-2010 .....	D1783-01.	.....
	Colorimetric (4AAP) manual.	420.1 (Rev. 1978) <sup>1</sup> .....	5530 D-2010 <sup>27</sup> .....	D1783-01 (A or B).	.....
	Automated colorimetric (4AAP).	420.4 Rev. 1.0 (1993).	.....	.....	.....
49. Phosphorus (elemental), mg/L.	Gas-liquid chromatography.	.....	.....	.....	See footnote. <sup>28</sup>
	Digestion, <sup>20</sup> followed by any of the following:	.....	4500-P B(5)-2011 .....	.....	973.55. <sup>3</sup>
50. Phosphorus—Total, mg/L.	Manual	365.3 (Issued 1978) <sup>1</sup> .....	4500-P E-2011 .....	D515-88 (A).	.....

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
51. Platinum—Total <sup>4</sup> , mg/L.	Automated ascorbic acid reduction.	365.1 Rev. 2.0 (1993) ....	4500-P (F-H)—2011 .....	.....	973.56, <sup>3</sup> I-4600-85. <sup>2</sup>
	ICP/AES <sup>4,36</sup> .....	200.7, Rev. 4.4 (1994) ...	3120 B-2011 .....	.....	I-4471-97. <sup>50</sup>
	Semi-automated block digester (TKP digestion).	365.4 (Issued 1974) <sup>1</sup> ....	.....	D515-88 (B) .....	I-4610-91. <sup>48</sup>
	Digestion with persulfate, followed by Colorimetric.	.....	.....	.....	NCASI TNTP W10900. <sup>77</sup>
52. Potassium—Total <sup>4</sup> , mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B-2011.	.....	See footnote. <sup>34</sup>
	AA furnace .....	255.2 (Issued 1978) <sup>1</sup> .	.....	.....	
	ICP/MS .....	.....	3125 B-2011.	.....	
	DCP .....	.....	.....	.....	
53. Residue—Total, mg/L	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B-2011 .....	.....	973.53, <sup>3</sup> I-3630-85. <sup>2</sup>
	ICP/AES .....	200.7, Rev. 4.4 (1994) ...	3120 B-2011.	.....	993.14. <sup>3</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	
	Flame photometric .....	.....	3500-K B-2011.	.....	
	Electrode .....	.....	3500-K C-2011.	.....	
Ion Chromatography .....	.....	.....	D6919-09.		
54. Residue—filterable, mg/L.	Gravimetric, 103–105° .....	.....	2540 B-2011 .....	.....	I-3750-85. <sup>2</sup>
55. Residue—non-filterable (TSS), mg/L.	Gravimetric, 180° .....	.....	2540 C-2011 .....	D5907-13 .....	I-1750-85. <sup>2</sup>
56. Residue—settleable, mg/L.	Gravimetric, 103–105° post washing of residue.	.....	2540 D-2011 .....	D5907-13 .....	I-3765-85. <sup>2</sup>
	Volumetric, (Imhoff cone), or gravimetric.	.....	2540 F-2011.	.....	.....
57. Residue—Volatile, mg/L.	Gravimetric, 550° .....	160.4 (Issued 1971) <sup>1</sup> ....	2540-E-2011 .....	.....	I-3753-85. <sup>2</sup>
58. Rhodium—Total <sup>4</sup> , mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration, or ...	.....	3111 B-2011.	.....	.....
	AA furnace .....	265.2 (Issued 1978) <sup>1</sup> .	.....	.....	
	ICP/MS .....	.....	3125 B-2011.	.....	
59. Ruthenium—Total <sup>4</sup> , mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration, or ...	.....	3111 B-2011.	.....	.....
	AA furnace .....	267.2 <sup>1</sup> .	.....	.....	
	ICP/MS .....	.....	3125 B-2011.	.....	
60. Selenium—Total <sup>4</sup> , mg/L.	Digestion, <sup>4</sup> followed by any of the following: AA furnace .....	.....	3113 B-2010 .....	D3859-08 (B) .....	I-4668-98. <sup>49</sup>
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	993.14, <sup>3</sup> I-4020-05. <sup>70</sup>
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	D1976-12.	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	
	AA gaseous hydride .....	.....	3114 B-2011, or 3114 C-2011.	D3859-08 (A) .....	
.....	.....	.....	.....		
61. Silica—Dissolved, <sup>37</sup> mg/L.	0.45-micron filtration followed by any of the following: Colorimetric, Manual .....	.....	4500-SiO <sub>2</sub> C-2011 .....	D859-10 .....	I-1700-85. <sup>2</sup>
	Automated (Molybdosilicate).	.....	4500-SiO <sub>2</sub> E-2011 or F-2011.	.....	I-2700-85. <sup>2</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	.....	I-4471-97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14, <sup>3</sup> I-4020-05. <sup>70</sup>
62. Silver—Total, <sup>4,31</sup> mg/L	AA gaseous hydride .....	.....	3114 B-2011, or 3114 C-2011.	D3859-08 (A) .....	I-3667-85. <sup>2</sup>
	Digestion, <sup>4,29</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B-2011 or 3111 C-2011.	.....	974.27, <sup>3</sup> p. 37, <sup>9</sup> I-3720-85. <sup>2</sup>
	AA furnace .....	.....	3113 B-2010 .....	.....	I-4724-89. <sup>51</sup>
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....	.....	I-4471-97. <sup>50</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	D1976-12 .....	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	
DCP .....	.....	.....	.....		
Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B-2011 .....	.....		
ICP/AES .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	.....		
63. Sodium—Total, <sup>4</sup> mg/L	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14, <sup>3</sup> I-4471-97. <sup>50</sup>
	DCP .....	.....	.....	.....	See footnote. <sup>34</sup>
	Digestion, <sup>4</sup> followed by any of the following: AA direct aspiration .....	.....	3111 B-2011 .....	.....	973.54, <sup>3</sup> I-3735-85. <sup>2</sup>
	ICP/AES .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	.....	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	
DCP .....	.....	.....	.....		
Flame photometric .....	.....	3500-Na B-2011.	.....		
64. Specific conductance, micromhos/cm at 25 °C.	Ion Chromatography .....	.....	.....	D6919-09.	973.40, <sup>3</sup> I-2781-85. <sup>2</sup>
	Wheatstone bridge .....	120.1 (Rev. 1982) <sup>1</sup> .....	2510 B-2011 .....	D1125-95(99) (A) .....	

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology <sup>58</sup>	EPA <sup>52</sup>	Standard methods	ASTM	USGS/AOAC/other
65. Sulfate (as SO <sub>4</sub> ), mg/L	Automated colorimetric ...	375.2, Rev. 2.0 (1993) ...	4500-SO <sub>4</sub> <sup>2-</sup> F-2011 or G-2011.		
	Gravimetric .....	.....	4500-SO <sub>4</sub> <sup>2-</sup> C-2011 or D-2011.		925.54. <sup>3</sup>
	Turbidimetric .....	.....	4500-SO <sub>4</sub> <sup>2-</sup> E-2011 .....	D516-11.	
	Ion Chromatography .....	300.0, Rev. 2.1 (1993) and 300.1, Rev. 1.0 (1997).	4110 B-2011 or C-2011	D4327-03 .....	993.30, <sup>3</sup> I-4020-05. <sup>70</sup>
66. Sulfide (as S), mg/L ..	CIE/UV .....	.....	4140 B-2011 .....	D6508-1010 .....	D6508, Rev. 2. <sup>54</sup>
	Sample Pretreatment .....	.....	4500-S <sup>2-</sup> B, C-2011.		
	Titrimetric (iodine) .....	.....	4500-S <sup>2-</sup> F-2011 .....		I-3840-85. <sup>2</sup>
	Colorimetric (methylene blue).	.....	4500-S <sup>2-</sup> D-2011.		
67. Sulfite (as SO <sub>3</sub> ), mg/L	Ion Selective Electrode ..	.....	4500-S <sup>2-</sup> G-2011 .....	D4658-09.	
	Titrimetric (iodine-iodate)	.....	4500-SO <sub>3</sub> <sup>2-</sup> B-2011.		
68. Surfactants, mg/L .....	Colorimetric (methylene blue).	.....	5540 C-2011 .....	D2330-02.	
	.....	.....	.....	.....	.....
69. Temperature, °C .....	Thermometric .....	.....	2550 B-2010 .....	.....	See footnote. <sup>32</sup>
70. Thallium—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration .....	.....	3111 B-2011.		
	AA furnace .....	279.2 (Issued 1978) <sup>1</sup> .....	3113 B-2010.		
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....		
	ICP/AES .....	200.7, Rev. 4.4 (1994) ...	3120 B-2011 .....	D1976-12.	
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14, <sup>3</sup> I-4471-97. <sup>50</sup>
	.....	.....	.....	.....	.....
71. Tin—Total, <sup>4</sup> mg/L .....	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration .....	.....	3111 B-2011 .....		I-3850-78. <sup>8</sup>
	AA furnace .....	.....	3113 B-2010.		
	STGFAA .....	200.9, Rev. 2.2 (1994).	.....		
	ICP/AES .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	.....		
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14. <sup>3</sup>
	.....	.....	.....	.....	.....
72. Titanium—Total, <sup>4</sup> mg/L	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration .....	.....	3111 D-2011.		
	AA furnace .....	283.2 (Issued 1978) <sup>1</sup> .....	.....		
	ICP/AES .....	200.7, Rev. 4.4 (1994).	.....		
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14. <sup>3</sup>
	DCP .....	.....	.....	D5673-10 .....	See footnote. <sup>34</sup>
73. Turbidity, NTU <sup>53</sup> .....	Nephelometric .....	180.1, Rev. 2.0 (1993) ...	2130 B-2011 .....	D1889-00 .....	I-3860-85. <sup>2</sup> See footnote. <sup>65</sup> See footnote. <sup>66</sup> See footnote. <sup>67</sup>
	.....	.....	.....	.....	.....
74. Vanadium—Total, <sup>4</sup> mg/L.	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration .....	.....	3111 D-2011.		
	AA furnace .....	.....	3113 B-2010 .....	D3373-12.	
	ICP/AES .....	200.5, Rev. 4.2 (2003); <sup>68</sup> 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	D1976-12 .....	I-4471-97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14, <sup>3</sup> I-4020-05. <sup>70</sup>
	DCP .....	.....	.....	D4190-08 .....	See footnote. <sup>34</sup>
75. Zinc—Total, <sup>4</sup> mg/L ....	Digestion, <sup>4</sup> followed by any of the following:	.....	.....	.....	.....
	AA direct aspiration <sup>36</sup> .....	.....	3111 B-2011 or 3111 C-2011.	D1691-12 (A or B) .....	974.27, <sup>3</sup> p. 37, <sup>9</sup> I-3900-85. <sup>2</sup>
	AA furnace .....	289.2 (Issued 1978) <sup>1</sup> .....	.....		
	ICP/AES <sup>36</sup> .....	200.5, Rev. 4.2 (2003) <sup>68</sup> ; 200.7, Rev. 4.4 (1994).	3120 B-2011 .....	D1976-12 .....	I-4471-97. <sup>50</sup>
	ICP/MS .....	200.8, Rev. 5.4 (1994) ...	3125 B-2011 .....	D5673-10 .....	993.14, <sup>3</sup> I-4020-05. <sup>70</sup>
	DCP <sup>36</sup> .....	.....	.....	D4190-08 .....	See footnote. <sup>34</sup>
76. Acid Mine Drainage ...	Colorimetric (Zincon) .....	.....	3500 Zn B-2011 .....	.....	See footnote. <sup>33</sup>
	.....	1627 <sup>69</sup> .	.....	.....	.....

**Table IB Notes:**

<sup>1</sup> Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020. Revised March 1983 and 1979, where applicable. U.S. EPA.  
<sup>2</sup> Methods for Analysis of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A1., unless otherwise stated. 1989. USGS.  
<sup>3</sup> Official Methods of Analysis of the Association of Official Analytical Chemists, Methods Manual, Sixteenth Edition, 4th Revision, 1998. AOAC International.  
<sup>4</sup> For the determination of total metals (which are equivalent to total recoverable metals) the sample is not filtered before processing. A digestion procedure is required to solubilize analytes in suspended material and to break down organic-metal complexes (to convert the analyte to a detectable form for colorimetric analysis). For non-platform graphite furnace atomic absorption determinations, a digestion using nitric acid (as specified in Section 4.1.3 of Methods for the Chemical Analysis of Water and Wastes) is required prior to analysis. The procedure used should subject the sample to gentle, acid refluxing and at no time should the sample be taken to dryness. For direct aspiration flame atomic absorption determinations (FLAA) a combination acid (nitric and hydrochloric acids) digestion is preferred prior to analysis. The approved total recoverable digestion is described as Method 200.2 in Supplement I of "Methods for the Determination of Metals in Environmental Samples" EPA/600R-94/111, May, 1994, and is reproduced in EPA Methods 200.7, 200.8, and 200.9 from the same Supplement. However, when using the gaseous hydride technique or for the determination of certain elements such as antimony, arsenic, selenium, silver, and tin by non-EPA graphite furnace atomic absorption methods, mercury by cold vapor atomic absorption, the noble metals and titanium by FLAA, a specific or modified sample digestion procedure may be required and in all cases the referenced method write-up should be consulted for specific instruction and/or cautions. For analyses using inductively coupled plasma-atomic emission spectrometry (ICP-AES), the direct current plasma (DCP) technique or EPA spectrochemical techniques (platform furnace AA, ICP-AES, and ICP-MS) use EPA Method 200.2 or an approved alternate procedure (e.g., CEM microwave digestion, which may be used with certain analytes as indicated in Table IB); the total recoverable digestion procedures in EPA Methods 200.7, 200.8, and 200.9 may be used for those respective methods. Regardless of the digestion procedure, the results of the analysis after digestion procedure are reported as "total" metals.  
<sup>5</sup> Copper sulfate or other catalysts that have been found suitable may be used in place of mercuric sulfate.

<sup>6</sup> Manual distillation is not required if comparability data on representative effluent samples are on file to show that this preliminary distillation step is not necessary. However, manual distillation will be required to resolve any controversies. In general, the analytical method should be consulted regarding the need for distillation. If the method is not clear, the laboratory may compare a minimum of 9 different sample matrices to evaluate the need for distillation. For each matrix, a matrix spike and matrix spike duplicate are analyzed both with and without the distillation step. (A total of 36 samples, assuming 9 matrices). If results are comparable, the laboratory may dispense with the distillation step for future analysis. Comparable is defined as <20% RPD for all tested matrices). Alternatively the two populations of spike recovery percentages may be compared using a recognized statistical test.

<sup>7</sup> Industrial Method Number 379-75 WE Ammonia, Automated Electrode Method, Technicon Auto Analyzer II. February 19, 1976. Bran & Luebbe Analyzing Technologies Inc.

<sup>8</sup> The approved method is that cited in Methods for Determination of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A1. 1979. USGS.

<sup>9</sup> American National Standard on Photographic Processing Effluents. April 2, 1975. American National Standards Institute.

<sup>10</sup> In-Situ Method 1003-8-2009, Biochemical Oxygen Demand (BOD) Measurement by Optical Probe. 2009. In-Situ Incorporated.

<sup>11</sup> The use of normal and differential pulse voltage ramps to increase sensitivity and resolution is acceptable.

<sup>12</sup> Carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>) must not be confused with the traditional BOD<sub>5</sub> test method which measures "total 5-day BOD." The addition of the nitrification inhibitor is not a procedural option, but must be included to report the CBOD<sub>5</sub> parameter. A discharger whose permit requires reporting the traditional BOD<sub>5</sub> may not use a nitrification inhibitor in the procedure for reporting the results. Only when a discharger's permit specifically states CBOD<sub>5</sub> is required can the permittee report data using a nitrification inhibitor.

<sup>13</sup> OIC Chemical Oxygen Demand Method. 1978. Oceanography International Corporation.

<sup>14</sup> Method 8000, Chemical Oxygen Demand, Hach Handbook of Water Analysis, 1979. Hach Company.

<sup>15</sup> The back titration method will be used to resolve controversy.

<sup>16</sup> Orion Research Instruction Manual, Residual Chlorine Electrode Model 97-70. 1977. Orion Research Incorporated. The calibration graph for the Orion residual chlorine method must be derived using a reagent blank and three standard solutions, containing 0.2, 1.0, and 5.0 mL 0.00281 N potassium iodate/100 mL solution, respectively.

<sup>17</sup> Method 245.7, Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, EPA-821-R-05-001. Revision 2.0, February 2005. US EPA.

<sup>18</sup> National Council of the Paper Industry for Air and Stream Improvement (NCASI) Technical Bulletin 253 (1971) and Technical Bulletin 803, May 2000.

<sup>19</sup> Method 8506, Bicinchoninate Method for Copper, Hach Handbook of Water Analysis. 1979. Hach Company.

<sup>20</sup> When using a method with block digestion, this treatment is not required.

<sup>21</sup> Industrial Method Number 378-75WA, Hydrogen ion (pH) Automated Electrode Method, Bran & Luebbe (Technicon) Autoanalyzer II. October 1976. Bran & Luebbe Analyzing Technologies.

<sup>22</sup> Method 8008, 1,10-Phenanthroline Method using FerroVer Iron Reagent for Water. 1980. Hach Company.

<sup>23</sup> Method 8034, Periodate Oxidation Method for Manganese, Hach Handbook of Wastewater Analysis. 1979. Hach Company.

<sup>24</sup> Methods for Analysis of Organic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A3, (1972 Revised 1987). 1987. USGS.

<sup>25</sup> Method 8507, Nitrogen, Nitrite-Low Range, Diazotization Method for Water and Wastewater. 1979. Hach Company.

<sup>26</sup> Just prior to distillation, adjust the sulfuric-acid-preserved sample to pH 4 with 1 + 9 NaOH.

<sup>27</sup> The colorimetric reaction must be conducted at a pH of 10.0 ± 0.2.

<sup>28</sup> Addison, R.F., and R.G. Ackman. 1970. Direct Determination of Elemental Phosphorus by Gas-Liquid Chromatography, *Journal of Chromatography*, 47(3):421-426.

<sup>29</sup> Approved methods for the analysis of silver in industrial wastewaters at concentrations of 1 mg/L and above are inadequate where silver exists as an inorganic halide. Silver halides such as the bromide and chloride are relatively insoluble in reagents such as nitric acid but are readily soluble in an aqueous buffer of sodium thiosulfate and sodium hydroxide to pH of 12. Therefore, for levels of silver above 1 mg/L, 20 mL of sample should be diluted to 100 mL by adding 40 mL each of 2 M Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> and NaOH. Standards should be prepared in the same manner. For levels of silver below 1 mg/L the approved method is satisfactory.

<sup>30</sup> The use of EDTA decreases method sensitivity. Analysts may omit EDTA or replace with another suitable complexing reagent provided that all method specified quality control acceptance criteria are met.

<sup>31</sup> For samples known or suspected to contain high levels of silver (e.g., in excess of 4 mg/L), cyanogen iodide should be used to keep the silver in solution for analysis. Prepare a cyanogen iodide solution by adding 4.0 mL of concentrated NH<sub>4</sub>OH, 6.5 g of KCN, and 5.0 mL of a 1.0 N solution of I<sub>2</sub> to 50 mL of reagent water in a volumetric flask and dilute to 100.0 mL. After digestion of the sample, adjust the pH of the digestate to >7 to prevent the formation of HCN under acidic conditions. Add 1 mL of the cyanogen iodide solution to the sample digestate and adjust the volume to 100 mL with reagent water (NOT acid). If cyanogen iodide is added to sample digestates, then silver standards must be prepared that contain cyanogen iodide as well. Prepare working standards by diluting a small volume of a silver stock solution with water and adjusting the pH>7 with NH<sub>4</sub>OH. Add 1 mL of the cyanogen iodide solution and let stand 1 hour. Transfer to a 100-mL volumetric flask and dilute to volume with water.

<sup>32</sup> "Water Temperature-Influential Factors, Field Measurement and Data Presentation," Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 1, Chapter D1. 1975. USGS.

<sup>33</sup> Method 8009, Zincon Method for Zinc, Hach Handbook of Water Analysis, 1979. Hach Company.

<sup>34</sup> Method AES0029, Direct Current Plasma (DCP) Optical Emission Spectrometric Method for Trace Elemental Analysis of Water and Wastes. 1986-Revised 1991. Thermo Jarrell Ash Corporation.

<sup>35</sup> In-Situ Method 1004-8-2009, Carbonaceous Biochemical Oxygen Demand (CBOD) Measurement by Optical Probe. 2009. In-Situ Incorporated.

<sup>36</sup> Microwave-assisted digestion may be employed for this metal, when analyzed by this methodology. Closed Vessel Microwave Digestion of Wastewater Samples for Determination of Metals. April 16, 1992. CEM Corporation.

<sup>37</sup> When determining boron and silica, only plastic, PTFE, or quartz laboratory ware may be used from start until completion of analysis.

<sup>38</sup> Only use n-hexane (n-Hexane—85% minimum purity, 99.0% min. saturated C6 isomers, residue less than 1 mg/L) extraction solvent when determining Oil and Grease parameters—Hexane Extractable Material (HEM), or Silica Gel Treated HEM (analogous to EPA Methods 1664 Rev. A and 1664 Rev. B). Use of other extraction solvents is prohibited.

<sup>39</sup> Method PAI-DK01, Nitrogen, Total Kjeldahl, Block Digestion, Steam Distillation, Titrimetric Detection. Revised December 22, 1994. OI Analytical.

<sup>40</sup> Method PAI-DK02, Nitrogen, Total Kjeldahl, Block Digestion, Steam Distillation, Colorimetric Detection. Revised December 22, 1994. OI Analytical.

<sup>41</sup> Method PAI-DK03, Nitrogen, Total Kjeldahl, Block Digestion, Automated FIA Gas Diffusion. Revised December 22, 1994. OI Analytical.

<sup>42</sup> Method 1664 Rev. B is the revised version of EPA Method 1664 Rev. A. U.S. EPA. February 1999, Revision A. Method 1664, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry. EPA-821-R-98-002. U.S. EPA. February 2010, Revision B. Method 1664, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry. EPA-821-R-10-001.

<sup>43</sup> Method 1631, Revision E, Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry, EPA-821-R-02-019. Revision E. August 2002. U.S. EPA. The application of clean techniques described in EPA's Method 1669: *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA-821-R-96-011, are recommended to preclude contamination at low-level, trace metal determinations.

<sup>44</sup> Method OIA-1677-09, Available Cyanide by Ligand Exchange and Flow Injection Analysis (FIA). 2010. OI Analytical.

<sup>45</sup> Open File Report 00-170, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Ammonium Plus Organic Nitrogen by a Kjeldahl Digestion Method and an Automated Photometric Finish that Includes Digest Cleanup by Gas Diffusion. 2000. USGS.

<sup>46</sup> Open File Report 93-449, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Chromium in Water by Graphite Furnace Atomic Absorption Spectrophotometry. 1993. USGS.

<sup>47</sup> Open File Report 97-198, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Molybdenum by Graphite Furnace Atomic Absorption Spectrophotometry. 1997. USGS.

<sup>48</sup> Open File Report 92-146, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Total Phosphorus by Kjeldahl Digestion Method and an Automated Colorimetric Finish That Includes Dialysis. 1992. USGS.

<sup>49</sup> Open File Report 98-639, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Arsenic and Selenium in Water and Sediment by Graphite Furnace-Atomic Absorption Spectrometry. 1999. USGS.

<sup>50</sup> Open File Report 98-165, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Elements in Whole-water Digests Using Inductively Coupled Plasma-Optical Emission Spectrometry and Inductively Coupled Plasma-Mass Spectrometry. 1998. USGS.

<sup>51</sup> Open File Report 93-125, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments. 1993. USGS.

<sup>52</sup> Unless otherwise indicated, all EPA methods, excluding EPA Method 300.1, are published in U.S. EPA. May 1994. Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA/600/R-94/111; or U.S. EPA. August 1993. Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100. EPA Method 300.1 is US EPA. Revision 1.0, 1997, including errata cover sheet April 27, 1999. Determination of Inorganic Ions in Drinking Water by Ion Chromatography.

<sup>53</sup> Styrene divinyl benzene beads (e.g., AMCO-AEPA-1 or equivalent) and stabilized formazin (e.g., Hach StablCal™ or equivalent) are acceptable substitutes for formazin.

<sup>54</sup> Method D6508-10, Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte. 2010. ASTM.

<sup>55</sup> Kelada-01, Kelada Automated Test Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate, EPA 821-B-01-009, Revision 1.2, August 2001. US EPA. Note: A 450-W UV lamp may be used in this method instead of the 550-W lamp specified if it provides performance within the quality control (QC) acceptance criteria of the method in a given instrument. Similarly, modified flow cell configurations and flow conditions may be used in the method, provided that the QC acceptance criteria are met.

<sup>56</sup> QuikChem Method 10-204-00-1-X, Digestion and Distillation of Total Cyanide in Drinking and Wastewaters using MICRO DIST and Determination of Cyanide by Flow Injection Analysis. Revision 2.2, March 2005. Lachat Instruments.

<sup>57</sup> When using sulfide removal test procedures described in EPA Method 335.4-1, reconstitute particulate that is filtered with the sample prior to distillation.

<sup>58</sup> Unless otherwise stated, if the language of this table specifies a sample digestion and/or distillation "followed by" analysis with a method, approved digestion and/or distillation are required prior to analysis.

<sup>59</sup> Samples analyzed for available cyanide using OI Analytical method OIA-1677-09 or ASTM method D6888-09 that contain particulate matter may be filtered only after the ligand exchange reagents have been added to the samples, because the ligand exchange process converts complexes containing available cyanide to free cyanide, which is not removed by filtration. Analysts are further cautioned to limit the time between the addition of the ligand exchange reagents and sample filtration to no more than 30 minutes to preclude settling of materials in samples.

<sup>60</sup> Analysts should be aware that pH optima and chromophore absorption maxima might differ when phenol is replaced by a substituted phenol as the color reagent in Berthelot Reaction ("phenol-hypochlorite reaction") colorimetric ammonium determination methods. For example when phenol is used as the color reagent, pH optimum and wavelength of maximum absorbance are about 11.5 and 635 nm, respectively—see, Patton, C.J. and S.R. Crouch. March 1977. Anal. Chem. 49:464-469. These reaction parameters increase to pH > 12.6 and 665 nm when salicylate is used as the color reagent—see, Krom, M.D. April 1980. The Analyst 105:305-316.

<sup>61</sup> If atomic absorption or ICP instrumentation is not available, the aluminum colorimetric method detailed in the 19th Edition of *Standard Methods* may be used. This method has poorer precision and bias than the methods of choice.

<sup>62</sup> Easy (1-Reagent) Nitrate Method, Revision November 12, 2011. Craig Chinchilla.

<sup>63</sup> Hach Method 10360, Luminescence Measurement of Dissolved Oxygen in Water and Wastewater and for Use in the Determination of BOD<sub>5</sub> and cBOD<sub>5</sub>, Revision 1.2, October 2011. Hach Company. This method may be used to measure dissolved oxygen when performing the methods approved in Table IB for measurement of biochemical oxygen demand (BOD) and carbonaceous biochemical oxygen demand (CBOD).

<sup>64</sup> In-Situ Method 1002-8-2009, Dissolved Oxygen (DO) Measurement by Optical Probe. 2009. In-Situ Incorporated.

<sup>65</sup> Mitchell Method M5331, Determination of Turbidity by Nephelometry. Revision 1.0, July 31, 2008. Leck Mitchell.

<sup>66</sup> Mitchell Method M5271, Determination of Turbidity by Nephelometry. Revision 1.0, July 31, 2008. Leck Mitchell.

<sup>67</sup> Orion Method AQ4500, Determination of Turbidity by Nephelometry. Revision 5, March 12, 2009. Thermo Scientific.

<sup>68</sup> EPA Method 200.5, Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry, EPA/600/R-06/115. Revision 4.2. October 2003. US EPA.

<sup>69</sup> Method 1627, Kinetic Test Method for the Prediction of Mine Drainage Quality, EPA-821-R-09-002. December 2011. US EPA.

<sup>70</sup> Techniques and Methods Book 5-B1, Determination of Elements in Natural-Water, Biota, Sediment and Soil Samples Using Collision/Reaction Cell Inductively Coupled Plasma-Mass Spectrometry, Chapter 1, Section B, Methods of the National Water Quality Laboratory, Book 5, Laboratory Analysis, 2006. USGS.

<sup>71</sup> Water-Resources Investigations Report 01-4132, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Organic Plus Inorganic Mercury in Filtered and Unfiltered Natural Water with Cold Vapor-Atomic Fluorescence Spectrometry, 2001. USGS.

<sup>72</sup> USGS Techniques and Methods 5-B8, Chapter 8, Section B, Methods of the National Water Quality Laboratory Book 5, Laboratory Analysis, 2011 USGS.

<sup>73</sup> NECi Method N07-0003, "Nitrate Reductase Nitrate-Nitrogen Analysis," Revision 9.0, March 2014, The Nitrate Elimination Co., Inc.

<sup>74</sup> Timberline Instruments, LLC Method Ammonia-001, "Determination of Inorganic Ammonia by Continuous Flow Gas Diffusion and Conductivity Cell Analysis," June 2011, Timberline Instruments, LLC.

<sup>75</sup> Hach Company Method 10206, "Spectrophotometric Measurement of Nitrate in Water and Wastewater," Revision 2.1, January 2013, Hach Company.

<sup>76</sup> Hach Company Method 10242, "Simplified Spectrophotometric Measurement of Total Kjeldahl Nitrogen in Water and Wastewater," Revision 1.1, January 2013, Hach Company.

<sup>77</sup> National Council for Air and Stream Improvement (NCASI) Method TNTP-W10900, "Total (Kjeldahl) Nitrogen and Total Phosphorus in Pulp and Paper Biologically Treated Effluent by Alkaline Persulfate Digestion," June 2011, National Council for Air and Stream Improvement, Inc.

<sup>78</sup> The pH adjusted sample is to be adjusted to 7.6 for NPDES reporting purposes.

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS

Parameter <sup>1</sup>	Method	EPA <sup>2,7</sup>	Standard methods	ASTM	Other
1. Acenaphthene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
2. Acenaphthylene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
3. Acrolein .....	GC .....	603 .....	.....	.....	
	GC/MS .....	624.1, <sup>4</sup> 1624B .....	.....	.....	
4. Acrylonitrile .....	GC .....	603 .....	.....	.....	
	GC/MS .....	624.1, <sup>4</sup> 1624B .....	.....	.....	
	GC .....	610 .....	.....	.....	
5. Anthracene .....	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
	GC .....	602 .....	6200 C-2011 .....	.....	
6. Benzene .....	GC/MS .....	624.1, 1624B .....	6200 B-2011 .....	.....	
	Spectro-photometric .....	.....	.....	.....	
	GC/MS .....	625.1 <sup>5</sup> , 1625B .....	6410 B-2000 .....	.....	
7. Benzidine .....	HPLC .....	605 .....	.....	.....	See footnote, <sup>3</sup> p. 1.
	GC .....	610 .....	.....	.....	
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
8. Benzo(a)anthracene .....	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	GC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
9. Benzo(a)pyrene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
10. Benzo(b)fluoranthene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
11. Benzo(g,h,i)perylene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
12. Benzo(k)fluoranthene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
13. Benzyl chloride .....	GC .....	.....	.....	.....	See footnote, <sup>3</sup> p. 130. See footnote, <sup>6</sup> p. S102.
	GC/MS .....	.....	.....	.....	
14. Butyl benzyl phthalate .....	GC .....	606 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
15. bis(2-Chloroethoxy) methane ..	GC .....	611 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
	GC .....	611 .....	.....	.....	
16. bis(2-Chloroethyl) ether .....	GC .....	611 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
17. bis(2-Ethylhexyl) phthalate .....	GC .....	606 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC .....	606 .....	.....	.....	

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter <sup>1</sup>	Method	EPA <sup>2,7</sup>	Standard methods	ASTM	Other
18. Bromodichloromethane .....	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC .....	601 .....	6200 C–2011 .....	.....	
19. Bromoform .....	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	.....
	GC .....	601 .....	6200 C–2011 .....	.....	
20. Bromomethane .....	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	.....
	GC .....	601 .....	6200 C–2011 .....	.....	
21. 4-Bromophenyl phenyl ether ...	GC .....	611 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
22. Carbon tetrachloride .....	GC .....	601 .....	6200 C–2011 .....	.....	See footnote, <sup>9</sup> p. 27. See footnote, <sup>3</sup> p. 130.
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
23. 4-Chloro-3-methyl phenol .....	GC .....	604 .....	6420 B–2000 .....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
24. Chlorobenzene .....	GC .....	601, 602 .....	6200 C–2011 .....	.....	See footnote, <sup>9</sup> p. 27. See footnote, <sup>3</sup> p. 130.
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
25. Chloroethane .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
26. 2-Chloroethylvinyl ether .....	GC .....	601 .....	.....	.....	.....
	GC/MS .....	624.1, 1624B .....	.....	.....	
27. Chloroform .....	GC .....	601 .....	6200 C–2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
28. Chloromethane .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
29. 2-Chloronaphthalene .....	GC .....	612 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
30. 2-Chlorophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
31. 4-Chlorophenyl phenyl ether ...	GC .....	611 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
32. Chrysene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
33. Dibenzo(a,h)anthracene .....	HPLC .....	610 .....	6440 B–2005 .....	D4657–92 (98) .....	See footnote, <sup>9</sup> p. 27.
	GC .....	610 .....	.....	.....	
34. Dibromochloromethane .....	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B–2005 .....	D4657–92 (98) .....	
35. 1,2-Dichlorobenzene .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
36. 1,3-Dichlorobenzene .....	GC .....	601, 602 .....	6200 C–2011 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	624.1, 1625B .....	6200 B–2011 .....	.....	
37. 1,4-Dichlorobenzene .....	GC .....	601, 602 .....	6200 C–2011 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	624.1, 1625B .....	6200 B–2011 .....	.....	
38. 3,3'-Dichlorobenzidine .....	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	.....
	HPLC .....	605 .....	.....	.....	
39. Dichlorodifluoromethane .....	GC .....	601 .....	.....	.....	.....
	GC/MS .....	.....	6200 C–2011 .....	.....	
40. 1,1-Dichloroethane .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
41. 1,2-Dichloroethane .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
42. 1,1-Dichloroethene .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
43. trans-1,2-Dichloroethene .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
44. 2,4-Dichlorophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
45. 1,2-Dichloropropane .....	GC .....	601 .....	6200 C–2011 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
46. cis-1,3-Dichloropropene .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
47. trans-1,3-Dichloropropene .....	GC .....	601 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	
48. Diethyl phthalate .....	GC .....	606 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
49. 2,4-Dimethylphenol .....	GC .....	604 .....	6420 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
50. Dimethyl phthalate .....	GC .....	606 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
51. Di-n-butyl phthalate .....	GC .....	606 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
52. Di-n-octyl phthalate .....	GC .....	606 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
53. 2, 4-Dinitrophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
54. 2,4-Dinitrotoluene .....	GC .....	609 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
55. 2,6-Dinitrotoluene .....	GC .....	609 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	
56. Epichlorohydrin .....	GC .....	.....	.....	.....	See footnote, <sup>3</sup> p. 130. See footnote, <sup>6</sup> p. S102.
	GC/MS .....	.....	.....	.....	

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter <sup>1</sup>	Method	EPA <sup>2,7</sup>	Standard methods	ASTM	Other
57. Ethylbenzene .....	GC .....	602 .....	6200 C–2011 .....	.....	.....
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	.....
58. Fluoranthene .....	GC .....	610 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B–2005 .....	D4657–92 (98) .....	.....
59. Fluorene .....	GC .....	610 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B–2005 .....	D4657–92 (98) .....	.....
60. 1,2,3,4,6,7,8-Heptachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
61. 1,2,3,4,7,8,9-Heptachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
62. 1,2,3,4,6,7,8- Heptachloro- dibenzo- <i>p</i> -dioxin.	GC/MS .....	1613B .....	.....	.....	.....
63. Hexachlorobenzene .....	GC .....	612 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
64. Hexachlorobutadiene .....	GC .....	612 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
65. Hexachlorocyclopentadiene ....	GC .....	612 .....	.....	.....	.....
	GC/MS .....	625.1, <sup>5</sup> 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
66. 1,2,3,4,7,8-Hexachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
67. 1,2,3,6,7,8-Hexachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
68. 1,2,3,7,8,9-Hexachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
69. 2,3,4,6,7,8-Hexachloro- dibenzofuran.	GC/MS .....	1613B .....	.....	.....	.....
70. 1,2,3,4,7,8-Hexachloro- dibenzo- <i>p</i> -dioxin.	GC/MS .....	1613B .....	.....	.....	.....
71. 1,2,3,6,7,8-Hexachloro- dibenzo- <i>p</i> -dioxin.	GC/MS .....	1613B .....	.....	.....	.....
72. 1,2,3,7,8,9-Hexachloro- dibenzo- <i>p</i> -dioxin.	GC/MS .....	1613B .....	.....	.....	.....
73. Hexachloroethane .....	GC .....	612 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
74. Indeno(1,2,3-c,d) pyrene .....	GC .....	610 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B–2005 .....	D4657–92 (98) .....	.....
75. Isophorone .....	GC .....	609 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
76. Methylene chloride .....	GC .....	601 .....	6200 C–2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	624.1, 1624B .....	6200 B–2011 .....	.....	.....
77. 2-Methyl-4,6-dinitrophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
78. Naphthalene .....	GC .....	610 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B–2005 .....	.....	.....
79. Nitrobenzene .....	GC .....	609 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	.....	.....	D4657–92 (98) .....	.....
80. 2-Nitrophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
81. 4-Nitrophenol .....	GC .....	604 .....	6420 B–2000 .....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
82. N-Nitrosodimethylamine .....	GC .....	607 .....	.....	.....	.....
	GC/MS .....	625.1, <sup>5</sup> 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
83. N-Nitrosodi- <i>n</i> -propylamine .....	GC .....	607 .....	.....	.....	.....
	GC/MS .....	625.1, <sup>5</sup> 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
84. N-Nitrosodiphenylamine .....	GC .....	607 .....	.....	.....	.....
	GC/MS .....	625.1, <sup>5</sup> 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
85. Octachlorodibenzofuran .....	GC/MS .....	1613B <sup>10</sup> .....	.....	.....	.....
86. Octachlorodibenzo- <i>p</i> -dioxin .....	GC/MS .....	1613B <sup>10</sup> .....	.....	.....	.....
87. 2,2'-oxybis(1-chloropropane) <sup>12</sup> [also known as bis(2-Chloro-1- methylethyl) ether].	GC .....	611 .....	.....	.....	.....
	GC/MS .....	625.1, 1625B .....	6410 B–2000 .....	.....	See footnote, <sup>9</sup> p. 27.
88. PCB–1016 .....	GC .....	608.3 .....	.....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC/MS .....	625.1 .....	6410 B–2000 .....	.....	.....
89. PCB–1221 .....	GC .....	608.3 .....	.....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC/MS .....	625.1 .....	6410 B–2000 .....	.....	.....
90. PCB–1232 .....	GC .....	608.3 .....	.....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC/MS .....	625.1 .....	6410 B–2000 .....	.....	.....
91. PCB–1242 .....	GC .....	608.3 .....	.....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC/MS .....	625.1 .....	6410 B–2000 .....	.....	.....
92. PCB–1248 .....	GC .....	608.3 .....	.....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter <sup>1</sup>	Method	EPA <sup>2,7</sup>	Standard methods	ASTM	Other
93. PCB-1254 .....	GC/MS .....	625.1 .....	6410 B-2000 .....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC .....	608.3 .....	.....	.....	
94. PCB-1260 .....	GC/MS .....	625.1 .....	6410 B-2000 .....	.....	See footnote, <sup>3</sup> p. 43; See footnote. <sup>8</sup>
	GC .....	608.3 .....	.....	.....	
95. 1,2,3,7,8-Pentachloro-dibenzofuran.	GC/MS .....	625.1 .....	6410 B-2000 .....	.....	
	GC/MS .....	1613B .....	.....	.....	
96. 2,3,4,7,8-Pentachloro-dibenzofuran.	GC/MS .....	1613B .....	.....	.....	
97. 1,2,3,7,8,-Pentachloro-dibenzo-p-dioxin.	GC/MS .....	1613B .....	.....	.....	
98. Pentachlorophenol .....	GC .....	604 .....	6420 B-2000 .....	.....	See footnote, <sup>3</sup> p. 140. See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
99. Phenanthrene .....	GC .....	610 .....	.....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	
100. Phenol .....	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
	GC .....	604 .....	6420 B-2000 .....	.....	
101. Pyrene .....	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC .....	610 .....	.....	.....	
102. 2,3,7,8-Tetrachloro-dibenzofuran.	GC/MS .....	625.1, 1625B .....	6410 B-2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	HPLC .....	610 .....	6440 B-2005 .....	D4657-92 (98) .....	
103. 2,3,7,8-Tetrachloro-dibenzo-p-dioxin.	GC/MS .....	1613B <sup>10</sup> .....	.....	.....	
104. 1,1,2,2-Tetrachloroethane .....	GC .....	613, 625.1, <sup>5a</sup> 1613B.	.....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
105. Tetrachloroethene .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
106. Toluene .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	602 .....	6200 C-2011 .....	.....	
107. 1,2,4-Trichlorobenzene .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130. See footnote, <sup>9</sup> p. 27.
	GC/MS .....	612 .....	6200 C-2011 .....	.....	
108. 1,1,1-Trichloroethane .....	GC .....	625.1, 1625B .....	6410 B-2000 .....	.....	See footnote, <sup>3</sup> p. 130. See footnote, <sup>9</sup> p. 27.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
109. 1,1,2-Trichloroethane .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
110. Trichloroethene .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
111. Trichlorofluoromethane .....	GC .....	624.1, 1624B .....	6200 B-2011 .....	.....	See footnote, <sup>3</sup> p. 130.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
112. 2,4,6-Trichlorophenol .....	GC .....	624.1 .....	6200 B-2011 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	604 .....	6420 B-2000 .....	.....	
113. Vinyl chloride .....	GC .....	625.1, 1625B .....	6410 B-2000 .....	.....	See footnote, <sup>9</sup> p. 27.
	GC/MS .....	601 .....	6200 C-2011 .....	.....	
114. Nonylphenol .....	GC/MS .....	624.1, 1624B .....	6200 B-2011 .....	.....	
115. Bisphenol A (BPA) .....	GC/MS .....	.....	.....	D7065-11 .....	
116. <i>p</i> -tert-Octylphenol (OP) .....	GC/MS .....	.....	.....	D7065-11 .....	
117. Nonylphenol Monoethoxylate (NP1EO) .....	GC/MS .....	.....	.....	D7065-11 .....	
118. Nonylphenol Diethoxylate (NP2EO) .....	GC/MS .....	.....	.....	D7065-11 .....	
119. Adsorbable Organic Halides (AOX) .....	Adsorption and Coulometric Titration.	1650 <sup>11</sup> .....	.....	.....	
120. Chlorinated Phenolics .....	In Situ Acetylation and GC/MS.	1653 <sup>11</sup> .....	.....	.....	

## Table IC notes:

<sup>1</sup> All parameters are expressed in micrograms per liter (µg/L) except for Method 1613B, in which the parameters are expressed in picograms per liter (pg/L).

<sup>2</sup> The full text of Methods 601-613, 1613B, 1624B, and 1625B are provided at appendix A, Test Procedures for Analysis of Organic Pollutants. The standardized test procedure to be used to determine the method detection limit (MDL) for these test procedures is given at appendix B of this part, Definition and Procedure for the Determination of the Method Detection Limit. These methods are available at: <https://www.epa.gov/cwa-methods> as individual PDF files.

<sup>3</sup> Methods for Benzidine: Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater. September 1978. U.S. EPA.

<sup>4</sup> Method 624.1 may be used for quantitative determination of acrolein and acrylonitrile, provided that the laboratory has documentation to substantiate the ability to detect and quantify these analytes at levels necessary to comply with any associated regulations. In addition, the use of sample introduction techniques other than simple purge-and-trap may be required. QC acceptance criteria from Method 603 should be used when analyzing samples for acrolein and acrylonitrile in the absence of such criteria in Method 624.1.

<sup>5</sup> Method 625.1 may be extended to include benzidine, hexachlorocyclopentadiene, N-nitrosodimethylamine, N-nitrosodi-n-propylamine, and N-nitrosodiphenylamine. However, when they are known to be present, Methods 605, 607, and 612, or Method 1625B, are preferred methods for these compounds.

<sup>5a</sup> Method 625.1 screening only.

<sup>6</sup> Selected Analytical Methods Approved and Cited by the United States Environmental Protection Agency, Supplement to the 15th Edition of *Standard Methods for the Examination of Water and Wastewater*. 1981. American Public Health Association (APHA).

<sup>7</sup> Each analyst must make an initial, one-time demonstration of their ability to generate acceptable precision and accuracy with Methods 601-603, 1624B, and 1625B in accordance with procedures each in Section 8.2 of each of these Methods. Additionally, each laboratory, on an on-going basis must spike and analyze 10% (5% for Methods 624.1 and 625.1 and 100% for methods 1624B and 1625B) of all samples to monitor and evaluate laboratory data quality in accordance with Sections 8.3 and 8.4 of these methods. When the recovery of any parameter falls outside the quality control (QC) acceptance criteria in the pertinent method, analytical results for that parameter in the unspiked sample are suspect. The results should be reported but cannot be used to demonstrate regulatory compliance. If the method does not contain QC acceptance criteria, control limits of +/- three standard deviations around the mean of a minimum of five replicate measurements must be used. These quality control requirements also apply to the Standard Methods, ASTM Methods, and other methods cited.

<sup>8</sup> Organochlorine Pesticides and PCBs in Wastewater Using Empore™ Disk. Revised October 28, 1994. 3M Corporation.

<sup>9</sup> Method O-3116-87 is in Open File Report 93-125, Methods of Analysis by U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments. 1993. USGS.

<sup>10</sup> Analysts may use Fluid Management Systems, Inc. Power-Prep system in place of manual cleanup provided the analyst meets the requirements of Method 1613B (as specified in Section 9 of the method) and permitting authorities. Method 1613, Revision B, Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS. Revision B, 1994. U.S. EPA. The full text of this method is provided in appendix A to this part and at <https://www.epa.gov/cwa-methods/ap-proved-cwa-methods-organic-compounds>.

<sup>11</sup> Method 1650, Adsorbable Organic Halides by Adsorption and Coulometric Titration. Revision C, 1997 U.S. EPA. Method 1653, Chlorinated Phenolics in Waste-water by In Situ Acetylation and GCMS. Revision A, 1997 U.S. EPA. The full text for both of these methods is provided at appendix A in part 430 of this chapter, The Pulp, Paper, and Paperboard Point Source Category.

<sup>12</sup> The compound was formerly inaccurately labeled as 2,2'-oxybis(2-chloropropane) and bis(2-chloroisopropyl) ether. Some versions of Methods 611, and 1625 inaccurately list the analyte as "bis(2-chloroisopropyl)ether," but use the correct CAS number of 108-60-1.

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES <sup>1</sup>

Parameter	Method	EPA <sup>2 7 10</sup>	Standard methods	ASTM	Other
1. Aldrin	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96 (02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		
2. Ametryn	GC	507, 619			See footnote, <sup>3</sup> p. 83; See footnote, <sup>9</sup> O-3106-93; See footnote, <sup>6</sup> p. S68.
	GC/MS	525.2, 625.1			See footnote, <sup>14</sup> O-1121-91.
3. Aminocarb	TLC				See footnote, <sup>3</sup> p. 94; See footnote, <sup>6</sup> p. S60.
	HPLC	632.			
4. Atraton	GC	619			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68.
	GC/MS	625.1.			
5. Atrazine	GC	507, 619, 608.3			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68; See footnote, <sup>9</sup> O-3106-93.
	HPLC/MS				See footnote, <sup>12</sup> O-2060-01.
	GC/MS	525.1, 525.2, 625.1			See footnote, <sup>11</sup> O-1126-95.
6. Azinphos methyl	GC	614, 622, 1657			See footnote, <sup>3</sup> p. 25; See footnote, <sup>6</sup> p. S51.
	GC/MS	625.1			See footnote, <sup>11</sup> O-1126-95.
7. Barban	TLC				See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	HPLC	632.			
	GC/MS	625.1.			
8. α-BHC	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1 <sup>5</sup>	6410 B-2000		See footnote, <sup>11</sup> O-1126-95.
9. β-BHC	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		
10. δ-BHC	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		
11. γ-BHC (Lindane)	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1 <sup>5</sup>	6410 B-2000		See footnote, <sup>11</sup> O-1126-95.
12. Captan	GC	617, 608.3	6630 B-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7.
	TLC				See footnote, <sup>3</sup> p. 94, See footnote, <sup>6</sup> p. S60.
	HPLC	531.1, 632.			See footnote, <sup>12</sup> O-2060-01.
	HPLC/MS	553			See footnote, <sup>11</sup> O-1126-95.
14. Carbophenothion	GC/MS	625.1			See footnote, <sup>4</sup> page 27; See footnote, <sup>6</sup> p. S73.
	GC	617, 608.3	6630 B-2007		
	GC/MS	625.1.			
15. Chlordane	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		
16. Chlorpropham	TLC				See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	HPLC	632.			
	GC/MS	625.1.			
17. 2,4-D	GC	615	6640 B-2006		See footnote, <sup>3</sup> p. 115; See footnote, <sup>4</sup> O-3105-83.
	HPLC/MS				See footnote, <sup>12</sup> O-2060-01.
18. 4,4'-DDD	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3105-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		
19. 4,4'-DDE	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000		See footnote, <sup>11</sup> O-1126-95.
20. 4,4'-DDT	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000.		

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES<sup>1</sup>—Continued

Parameter	Method	EPA <sup>2,7,10</sup>	Standard methods	ASTM	Other
21. Demeton-O	GC	614, 622			See footnote, <sup>3</sup> p. 25; See footnote, <sup>6</sup> p. S51.
22. Demeton-S	GC/MS	625.1			See footnote, <sup>3</sup> p. 25; See footnote, <sup>6</sup> p. S51.
	GC	614, 622			
23. Diazinon	GC/MS	625.1			See footnote, <sup>3</sup> p. 25; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>6</sup> p. S51.
	GC	507, 614, 622, 1657			
24. Dicamba	GC/MS	525.2, 625.1			See footnote, <sup>11</sup> O-1126-95. See footnote, <sup>3</sup> p. 115. See footnote, <sup>12</sup> O-2060-01.
	GC	615			
	HPLC/MS				
25. Dichlofenthion	GC	622.1			See footnote, <sup>4</sup> page 27; See footnote, <sup>6</sup> p. S73.
26. Dichloran	GC	608.2, 617, 608.3	6630 B-2007		See footnote, <sup>3</sup> p. 7.
27. Dicofol	GC	617, 608.3			See footnote, <sup>4</sup> O-3104-83.
28. Dieldrin	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	625.1	6410 B-2000		See footnote, <sup>11</sup> O-1126-95.
29. Dioxathion	GC	614.1, 1657			See footnote, <sup>4</sup> page 27; See footnote, <sup>6</sup> p. S73.
	GC/MS	625.1			
30. Disulfoton	GC	507, 614, 622, 1657			See footnote, <sup>3</sup> p. 25; See footnote, <sup>6</sup> p. S51.
31. Diuron	GC/MS	525.2, 625.1			See footnote, <sup>11</sup> O-1126-95. See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	TLC				
32. Endosulfan I	HPLC	632.			See footnote, <sup>12</sup> O-2060-01. See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222).
	HPLC/MS	553	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	
	GC	617, 608.3			
33. Endosulfan II	GC/MS	625.1 <sup>5</sup>	6410 B-2000		See footnote, <sup>13</sup> O-2002-01. See footnote, <sup>3</sup> p. 7; See footnote, <sup>8</sup> 3M0222.
	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	
34. Endosulfan Sulfate	GC/MS	625.1 <sup>5</sup>	6410 B-2000		See footnote, <sup>13</sup> O-2002-01. See footnote, <sup>8</sup> 3M0222.
	GC	617, 608.3	6630 C-2007		
	GC/MS	625.1	6410 B-2000		
35. Endrin	GC	505, 508, 617, 1656, 608.3.	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC/MS	525.1, 525.2, 625.1 <sup>5</sup>	6410 B-2000		See footnote, <sup>8</sup> 3M0222.
36. Endrin aldehyde	GC	617, 608.3	6630 C-2007		
37. Ethion	GC/MS	625.1			See footnote, <sup>4</sup> page 27; See footnote, <sup>6</sup> p. S73. See footnote, <sup>13</sup> O-2002-01.
	GC	614, 614.1, 1657			
38. Fenuron	GC/MS	625.1			See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	TLC				
39. Fenuron-TCA	HPLC	632.			See footnote, <sup>12</sup> O-2060-01. See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	HPLC/MS				
	TLC				
40. Heptachlor	HPLC	632.			See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222.
	GC	505, 508, 617, 1656, 608.3.	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	
41. Heptachlor epoxide	GC/MS	525.1, 525.2, 625.1	6410 B-2000		See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>6</sup> p. S73; See footnote, <sup>8</sup> 3M0222.
	GC	617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	
42. Isodrin	GC/MS	625.1	6410 B-2000		See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>6</sup> p. S73.
	GC	617, 608.3	6630 B-2007 & C-2007		
43. Linuron	GC/MS	625.1			See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	GC				
44. Malathion	HPLC	632.			See footnote, <sup>12</sup> O-2060-01. See footnote, <sup>11</sup> O-1126-95. See footnote, <sup>3</sup> p. 25; See footnote, <sup>6</sup> p. S51. See footnote, <sup>11</sup> O-1126-95.
	HPLC/MS	553			
	GC/MS				
	GC	614, 1657	6630 B-2007		
45. Methiocarb	GC/MS	625.1			See footnote, <sup>3</sup> p. 94; See footnote, <sup>6</sup> p. S60.
	TLC				
46. Methoxychlor	HPLC	632.			See footnote, <sup>12</sup> O-2060-01. See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83; See footnote, <sup>8</sup> 3M0222. See footnote, <sup>11</sup> O-1126-95.
	HPLC/MS				
	GC	505, 508, 608.2, 617, 1656, 608.3.	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	
	GC/MS	525.1, 525.2, 625.1			

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES <sup>1</sup>—Continued

Parameter	Method	EPA <sup>2,7,10</sup>	Standard methods	ASTM	Other
47. Mexacarbate	TLC				See footnote, <sup>3</sup> p. 94; See footnote, <sup>6</sup> p. S60.
48. Mirex	HPLC	632.	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>4</sup> O-3104-83.
	GC/MS	625.1.			
49. Monuron	GC	617, 608.3			
	GC/MS	625.1.			
50. Monuron-TCA	TLC				See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	HPLC	632.			
51. Neburon	TLC				See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	HPLC	632.			
52. Parathion methyl	HPLC/MS	632.			See footnote, <sup>12</sup> O-2060-01.
	GC	614, 622, 1657	6630 B-2007		See footnote, <sup>4</sup> page 27; See footnote, <sup>3</sup> p. 25.
53. Parathion ethyl	GC/MS	625.1			See footnote, <sup>11</sup> O-1126-95.
	GC	614	6630 B-2007		See footnote, <sup>4</sup> page 27; See footnote, <sup>3</sup> p. 25.
54. PCNB	GC/MS				See footnote, <sup>11</sup> O-1126-95.
	GC	608.1, 617, 608.3	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7.
55. Perthane	GC	617, 608.3		D3086-90, D5812-96(02).	See footnote, <sup>4</sup> O-3104-83.
56. Prometon	GC	507, 619			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68; See footnote, <sup>9</sup> O-3106-93.
57. Prometryn	GC/MS	525.2, 625.1			See footnote, <sup>11</sup> O-1126-95.
	GC	507, 619			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68; See footnote, <sup>9</sup> O-3106-93.
58. Propazine	GC/MS	525.1, 525.2, 625.1			See footnote, <sup>13</sup> O-2002-01.
	GC	507, 619, 1656, 608.3			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68; See footnote, <sup>9</sup> O-3106-93.
59. Propham	GC/MS	525.1, 525.2, 625.1.			
	TLC				See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
60. Propoxur	HPLC	632.			See footnote, <sup>12</sup> O-2060-01.
	HPLC/MS				See footnote, <sup>3</sup> p. 94; See footnote, <sup>6</sup> p. S60.
61. Sebumeton	TLC				See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68.
	HPLC	632.			
62. Siduron	GC	619.			See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	TLC				
63. Simazine	HPLC	632.			See footnote, <sup>12</sup> O-2060-01.
	HPLC/MS				See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68; See footnote, <sup>9</sup> O-3106-93.
64. Strobane	GC	505, 507, 619, 1656, 608.3.			See footnote, <sup>11</sup> O-1126-95.
	GC/MS	525.1, 525.2, 625.1			See footnote, <sup>3</sup> p. 7.
65. Swep	GC	617, 608.3	6630 B-2007 & C-2007		See footnote, <sup>3</sup> p. 104; See footnote, <sup>6</sup> p. S64.
	TLC				
66. 2,4,5-T	HPLC	632.			See footnote, <sup>3</sup> p. 115; See footnote, <sup>4</sup> O-3105-83.
	GC	615	6640 B-2006		
67. 2,4,5-TP (Silvex)	GC	615	6640 B-2006		See footnote, <sup>3</sup> p. 115; See footnote, <sup>4</sup> O-3105-83.
68. Terbutylazine	GC	619, 1656, 608.3			See footnote, <sup>3</sup> p. 83; See footnote, <sup>6</sup> p. S68.
69. Toxaphene	GC/MS				See footnote, <sup>13</sup> O-2002-01.
	GC	505, 508, 617, 1656, 608.3.	6630 B-2007 & C-2007	D3086-90, D5812-96(02).	See footnote, <sup>3</sup> p. 7; See footnote, <sup>6</sup> See footnote, <sup>4</sup> O-3105-83.
70. Trifluralin	GC/MS	525.1, 525.2, 625.1	6410 B-2000.		
	GC	508, 617, 627, 1656, 608.3.	6630 B-2007		See footnote, <sup>3</sup> p. 7; See footnote, <sup>9</sup> O-3106-93.
	GC/MS	525.2, 625.1			See footnote, <sup>11</sup> O-1126-95.

**Table ID notes:**

<sup>1</sup> Pesticides are listed in this table by common name for the convenience of the reader. Additional pesticides may be found under Table IC of this section, where entries are listed by chemical name.

<sup>2</sup> The standardized test procedure to be used to determine the method detection limit (MDL) for these test procedures is given at appendix B of this part, Definition and Procedure for the Determination of the Method Detection Limit.

<sup>3</sup> Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater. September 1978. U.S. EPA. This EPA publication includes thin-layer chromatography (TLC) methods.

<sup>4</sup> Methods for the Determination of Organic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A3. 1987. USGS.

<sup>5</sup> The method may be extended to include  $\alpha$ -BHC,  $\gamma$ -BHC, endosulfan I, endosulfan II, and endrin. However, when they are known to exist, Method 608.3 is the preferred method.

<sup>6</sup> Selected Analytical Methods Approved and Cited by the United States Environmental Protection Agency, Supplement to the 15th Edition of *Standard Methods for the Examination of Water and Wastewater*. 1981. American Public Health Association (APHA).

<sup>7</sup> Each analyst must make an initial, one-time, demonstration of their ability to generate acceptable precision and accuracy with Methods 608.3 and 625.1 in accordance with procedures given in Section 8.2 of each of these methods. Additionally, each laboratory, on an on-going basis, must spike and analyze 5% of all samples analyzed with Method 608.3 or 5% of all samples analyzed with Method 625.1 to monitor and evaluate laboratory data quality in accordance with Sections 8.3 and 8.4 of these methods. When the recovery of any parameter falls outside the warning limits, the analytical results for that parameter in the unspiked sample are suspect. The results should be reported, but cannot be used to demonstrate regulatory compliance. These quality control requirements also apply to the Standard Methods, ASTM Methods, and other methods cited.

<sup>8</sup> Organochlorine Pesticides and PCBs in Wastewater Using Empore™ Disk. Revised October 28, 1994. 3M Corporation.

<sup>9</sup> Method O-3106-93 is in Open File Report 94-37, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Triazine and Other Nitrogen-Containing Compounds by Gas Chromatography With Nitrogen Phosphorus Detectors. 1994. USGS.

<sup>10</sup> EPA Methods 608.1, 608.2, 614, 614.1, 615, 617, 619, 622, 622.1, 627, and 632 are found in Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, EPA 821-R-92-002, April 1992, U.S. EPA. EPA Methods 505, 507, 508, 525.1, 531.1 and 553 are in Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume II, EPA 821-R-93-010B, 1993, U.S. EPA. EPA Method 525.2 is in Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry, Revision 2.0, 1995, U.S. EPA. EPA methods 1656 and 1657 are in Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume I, EPA 821-R-93-010A, 1993, U.S. EPA. Methods 608.3 and 625.1 are available at <https://www.epa.gov/cwa-methods/approved-cwa-test-methods-organic-compounds>.

<sup>11</sup> Method O-1126-95 is in Open-File Report 95-181, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of pesticides in water by C-18 solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring. 1995. USGS.

<sup>12</sup> Method O-2060-01 is in Water-Resources Investigations Report 01-4134, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Pesticides in Water by Graphitized Carbon-Based Solid-Phase Extraction and High-Performance Liquid Chromatography/Mass Spectrometry. 2001. USGS.

<sup>13</sup> Method O-2002-01 is in Water-Resources Investigations Report 01-4098, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of moderate-use pesticides in water by C-18 solid-phase extraction and capillary-column gas chromatography/mass spectrometry. 2001. USGS.

<sup>14</sup> Method O-1121-91 is in Open-File Report 91-519, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of organonitrogen herbicides in water by solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring. 1992. USGS.

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TABLE IF—LIST OF APPROVED METHODS FOR PHARMACEUTICAL POLLUTANTS

Pharmaceuticals pollutants	CAS registry No.	Analytical method number
Acetonitrile .....	75-05-8	1666/1671/D3371/D3695/624.1
n-Amyl acetate .....	628-63-7	1666/D3695
n-Amyl alcohol .....	71-41-0	1666/D3695
Benzene .....	71-43-2	D4763/D3695/502.2/524.2/624.1
n-Butyl-acetate .....	123-86-4	1666/D3695
tert-Butyl alcohol .....	75-65-0	1666/624.1
Chlorobenzene .....	108-90-7	502.2/524.2/624.1
Chloroform .....	67-66-3	502.2/524.2/551/624.1
o-Dichlorobenzene .....	95-50-1	1625C/502.2/524.2/624.1
1,2-Dichloroethane .....	107-06-2	D3695/502.2/524.2/624.1
Diethylamine .....	109-89-7	1666/1671
Dimethyl sulfoxide .....	67-68-5	1666/1671
Ethanol .....	64-17-5	1666/1671/D3695/624.1
Ethyl acetate .....	141-78-6	1666/D3695/624.1
n-Heptane .....	142-82-5	1666/D3695
n-Hexane .....	110-54-3	1666/D3695
Isobutyraldehyde .....	78-84-2	1666/1667
Isopropanol .....	67-63-0	1666/D3695
Isopropyl acetate .....	108-21-4	1666/D3695
Isopropyl ether .....	108-20-3	1666/D3695
Methanol .....	67-56-1	1666/1671/D3695/624.1
Methyl Cellosolve® (2-Methoxy ethanol) .....	109-86-4	1666/1671
Methylene chloride .....	75-09-2	502.2/524.2/624.1
Methyl formate .....	107-31-3	1666
4-Methyl-2-pentanone (MIBK) .....	108-10-1	1624C/1666/D3695/D4763/524.2/624.1
Phenol .....	108-95-2	D4763
n-Propanol .....	71-23-8	1666/1671/D3695/624.1
2-Propanone (Acetone) .....	67-64-1	D3695/D4763/524.2/624.1
Tetrahydrofuran .....	109-99-9	1666/524.2/624.1
Toluene .....	108-88-3	D3695/D4763/502.2/524.2/624.1
Triethylamine .....	121-44-8	1666/1671
Xylenes .....	(Note 1)	1624C/1666/624.1

**Table IF note:**

<sup>1</sup> 1624C: *m*-xylene 108-38-3, *o,p*-xylene, E-14095 (Not a CAS number; this is the number provided in the Environmental Monitoring Methods Index [EMMI] database.); 1666: *m,p*-xylene 136777-61-2, *o*-xylene 95-47-6.

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS

[40 CFR part 455]

EPA survey code	Pesticide name	CAS No.	EPA analytical method No.(s) <sup>3</sup>
8 .....	Triadimefon .....	43121-43-3	507/633/525.1/525.2/1656/625.1.

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS—Continued  
[40 CFR part 455]

EPA survey code	Pesticide name	CAS No.	EPA analytical method No.(s) <sup>3</sup>
12	Dichlorvos	62-73-7	1657/507/622/525.1/525.2/625.1.
16	2,4-D; 2,4-D Salts and Esters [2,4-Dichloro-phenoxy-acetic acid].	94-75-7	1658/515.1/615/515.2/555.
17	2,4-DB; 2,4-DB Salts and Esters [2,4-Dichlorophenoxybutyric acid].	94-82-6	1658/515.1/615/515.2/555.
22	Mevinphos	7786-34-7	1657/507/622/525.1/525.2/625.1.
25	Cyanazine	21725-46-2	629/507/608.3/625.1.
26	Propachlor	1918-16-7	1656/508/608.1/525.1/525.2/608.3/625.1.
27	MCPA; MCPA Salts and Esters [2-Methyl-4-chlorophenoxyacetic acid]	94-74-6	1658/615/555.
30	Dichlorprop; Dichlorprop Salts and Esters [2-(2,4-Dichlorophenoxy) propionic acid].	120-36-5	1658/515.1/615/515.2/555.
31	MCPP; MCPP Salts and Esters [2-(2-Methyl-4-chlorophenoxy) propionic acid].	93-65-2	1658/615/555.
35	TCMTB [2-(Thiocyanomethylthio) benzo-thiazole]	21564-17-0	637.
39	Pronamide	23950-58-5	525.1/525.2/507/633.1/625.1.
41	Propanil	709-98-8	632.1/1656/608.3.
45	Metribuzin	21087-64-9	507/633/525.1/525.2/1656/608.3/625.1.
52	Acephate	30560-19-1	1656/1657/608.3.
53	Acifluorfen	50594-66-6	515.1/515.2/555.
54	Alachlor	15972-60-8	505/507/645/525.1/525.2/1656/608.3/625.1.
55	Aldicarb	116-06-3	531.1.
58	Ametryn	834-12-8	507/619/525.2/625.1.
60	Atrazine	1912-24-9	505/507/619/525.1/525.2/1656/608.3/625.1.
62	Benomyl	17804-35-2	631.
68	Bromacil; Bromacil Salts and Esters	314-40-9	507/633/525.1/525.2/1656/608.3/625.1.
69	Bromoxynil	1689-84-5	1625/1661/625.1.
69	Bromoxynil Octanoate	1689-99-2	1656/608.3.
70	Butachlor	23184-66-9	507/645/525.1/525.2/1656/608.3/625.1.
73	Captafol	2425-06-1	1656/608.3/625.1.
75	Carbaryl [Sevin]	63-25-2	531.1/632/553/625.1.
76	Carbofuran	1563-66-2	531.1/632/625.1.
80	Chloroneb	2675-77-6	1656/508/608.1/525.1/525.2/608.3/625.1.
82	Chlorothalonil	1897-45-6	508/608.2/525.1/525.2/1656/608.3/625.1.
84	Stiufos	961-11-5	1657/507/622/525.1/525.2/625.1.
86	Chlorpyrifos	2921-88-2	1657/508/622/625.1.
90	Fenvalerate	51630-58-1	1660.
103	Diazinon	333-41-5	1657/507/614/622/525.2/625.1.
107	Parathion methyl	298-00-0	1657/614/622/625.1.
110	DCPA [Dimethyl 2,3,5,6-tetrachloro-terephthalate]	1861-32-1	508/608.2/525.1/525.2/515.1 <sup>2</sup> /515.2 <sup>2</sup> /1656/608.3/625.1.
112	Dinoseb	88-85-7	1658/515.1/615/515.2/555/625.1.
113	Dioxathion	78-34-2	1657/614.1.
118	Nabonate [Disodium cyanodithio-imidocarbonate]	138-93-2	630.1.
119	Diuron	330-54-1	632/553.
123	Endothall	145-73-3	548/548.1.
124	Endrin	72-20-8	1656/505/508/617/525.1/525.2/608.3/625.1.
125	Ethalfuralin	55283-68-6	1656/627/608.3 See footnote 1.
126	Ethion	563-12-2	1657/614/614.1/625.1.
127	Ethoprop	13194-48-4	1657/507/622/525.1/525.2/625.1.
132	Fenarimol	60168-88-9	507/633.1/525.1/525.2/1656/608.3/625.1.
133	Fenthion	55-38-9	1657/622/625.1.
138	Glyphosate [N-(Phosphonomethyl) glycine]	1071-83-6	547.
140	Heptachlor	76-44-8	1656/505/508/617/525.1/525.2/608.3/625.1.
144	Isopropalin	33820-53-0	1656/627/608.3.
148	Linuron	330-55-2	553/632.
150	Malathion	121-75-5	1657/614/625.1.
154	Methamidophos	10265-92-6	1657.
156	Methomyl	16752-77-5	531.1/632.
158	Methoxychlor	72-43-5	1656/505/508/608.2/617/525.1/525.2/608.3/625.1.
172	Nabam	142-59-6	630/630.1.
173	Naled	300-76-5	1657/622/625.1.
175	Norflurazon	27314-13-2	507/645/525.1/525.2/1656/608.3/625.1.
178	Benfluralin	1861-40-1	1656/627/608.3 See footnote 1.
182	Fensulfthion	115-90-2	1657/622/625.1.
183	Disulfoton	298-04-4	1657/507/614/622/525.2/625.1.
185	Phosmet	732-11-6	1657/622.1/625.1.
186	Azinphos Methyl	86-50-0	1657/614/622/625.1.
192	Organo-tin pesticides	12379-54-3	Ind-01/200.7/200.9.
197	Bolstar	35400-43-2	1657/622.

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS—Continued  
[40 CFR part 455]

EPA survey code	Pesticide name	CAS No.	EPA analytical method No.(s) <sup>3</sup>
203	Parathion	56-38-2	1657/614/625.1.
204	Pendimethalin	40487-42-1	1656.
205	Pentachloronitrobenzene	82-68-8	1656/608.1/617/608.3/625.1.
206	Pentachlorophenol	87-86-5	1625/515.2/555/515.1/525.1/525.2/625.1.
208	Permethrin	52645-53-1	608.2/508/525.1/525.2/1656/1660/608.3 <sup>4</sup> /625.1 <sup>4</sup> .
212	Phorate	298-02-2	1657/622/625.1.
218	Busan 85 [Potassium dimethyldithiocarbamate]	128-03-0	630/630.1.
219	Busan 40 [Potassium N-hydroxymethyl-N-methyldithiocarbamate].	51026-28-9	630/630.1.
220	KN Methyl [Potassium N-methyl-dithiocarbamate]	137-41-7	630/630.1.
223	Prometon	1610-18-0	507/619/525.2/625.1.
224	Prometryn	7287-19-6	507/619/525.1/525.2/625.1.
226	Propazine	139-40-2	507/619/525.1/525.2/1656/608.3/625.1.
230	Pyrethrin I	121-21-1	1660.
232	Pyrethrin II	121-29-9	1660.
236	DEF [S,S,S-Tributyl phosphorotrithioate]	78-48-8	1657.
239	Simazine	122-34-9	505/507/619/525.1/525.2/1656/608.3/625.1.
241	Carbam-S [Sodium dimethyldithio-carbamate]	128-04-1	630/630.1.
243	Vapam [Sodium methyldithiocarbamate]	137-42-8	630/630.1.
252	Tebuthiuron	34014-18-1	507/525.1/525.2/625.1.
254	Terbacil	5902-51-2	507/633/525.1/525.2/1656/608.3/625.1.
255	Terbufos	13071-79-9	1657/507/614.1/525.1/525.2/625.1.
256	Terbutylazine	5915-41-3	619/1656/608.3.
257	Terbutryn	886-50-0	507/619/525.1/525.2/625.1.
259	Dazomet	533-74-4	630/630.1/1659.
262	Toxaphene	8001-35-2	1656/505/508/617/525.1/525.2/608.3/625.1.
263	Merphos [Tributyl phosphorotrithioate]	150-50-5	1657/507/525.1/525.2/622/625.1.
264	Trifluralin <sup>1</sup>	1582-09-8	1656/508/617/627/525.2/608.3/625.1.
268	Ziram [Zinc dimethyldithiocarbamate]	137-30-4	630/630.1.

**Table IG notes:**

<sup>1</sup> Monitor and report as total Trifluralin.

<sup>2</sup> Applicable to the analysis of DCPA degradates.

<sup>3</sup> EPA Methods 608.1 through 645, 1645 through 1661, and Ind-01 are available in Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume I, EPA 821-R-93-010A, Revision I, August 1993, U.S. EPA. EPA Methods 200.9 and 505 through 555 are available in Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume II, EPA 821-R-93-010B, August 1993, U.S. EPA. The full text of Methods 608.3, 625.1, and 1625 are provided at appendix A of this part. The full text of Method 200.7 is provided at appendix C of this part. Methods 608.3 and 625.1 are available at <https://www.epa.gov/cwa-methods/ap-proved-cwa-test-methods-organic-compounds>.

<sup>4</sup> Permethrin is not listed within methods 608.3 and 625.1; however, *cis*-permethrin and *trans*-permethrin are listed. Permethrin can be calculated by adding the results of *cis*- and *trans*-permethrin.

TABLE IH—LIST OF APPROVED MICROBIOLOGICAL METHODS FOR AMBIENT WATER

Parameter and units	Method <sup>1</sup>	EPA	Standard methods	AOAC, ASTM, USGS	Other
<b>Bacteria</b>					
1. Coliform (fecal), number per 100 mL or number per gram dry weight.	Most Probable Number (MPN), 5 tube, 3 dilution, or	p. 132 <sup>3</sup>	9221 C E-2006.		
	Membrane filter (MF), <sup>2</sup> single step.	p. 124 <sup>3</sup>	9222 D-2006 <sup>27</sup>	B-0050-85. <sup>4</sup>	
2. Coliform (fecal) in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or ...	p. 132 <sup>3</sup>	9221 C E-2006.		
3. Coliform (total), number per 100 mL.	MF, <sup>2</sup> single step <sup>5</sup>	p. 124 <sup>3</sup>	9222 D-2006. <sup>27</sup>		
	MPN, 5 tube, 3 dilution, or ...	p. 114 <sup>3</sup>	9221 B-2006.		
4. Coliform (total), in presence of chlorine, number per 100 mL.	MF, <sup>2</sup> single step or two step	p. 108 <sup>3</sup>	9222 B-2006	B-0025-85. <sup>4</sup>	
	MPN, 5 tube, 3 dilution, or ...	p. 114 <sup>3</sup>	9221 B-2006.		
5. <i>E. coli</i> , number per 100 mL	MF <sup>2</sup> with enrichment	p. 111 <sup>3</sup>	9222 B-2006.		
	MPN, <sup>6,8,14</sup> multiple tube, or ...		9221 B.2-2006/9221 F-2006 <sup>11,13</sup> .		
	Multiple tube/multiple well, or		9223 B-2004 <sup>12</sup>	991.15 <sup>10</sup>	Colilert <sup>®</sup> , <sup>12,16</sup> Colilert-18 <sup>®</sup> , <sup>12,15,16</sup>
6. Fecal streptococci, number per 100 mL.	MF, <sup>2,5,6,7,8</sup> two step, or	1103.1 <sup>19</sup>	9222 B-2006/9222 G-2006, <sup>18</sup> 9213 D-2007.	D-5392-93. <sup>9</sup>	
	Single step	1603, <sup>20</sup> 1604 <sup>21</sup>			mColiBlue-24 <sup>®</sup> , <sup>17</sup>
	MPN, 5 tube, 3 dilution, or ...	p. 139 <sup>3</sup>	9230 B-2007.		
	MF <sup>2</sup> , or	p. 136 <sup>3</sup>	9230 C-2007	B-0055-85 <sup>4</sup>	

TABLE IH—LIST OF APPROVED MICROBIOLOGICAL METHODS FOR AMBIENT WATER—Continued

Parameter and units	Method <sup>1</sup>	EPA	Standard methods	AOAC, ASTM, USGS	Other
7. Enterococci, number per 100 mL.	Plate count .....	p. 143. <sup>3</sup>			
	MPN, <sup>6,8</sup> multiple tube/multiple well, or	.....	9230 D–2007 .....	D6503–99 <sup>9</sup> ...	Enterolert®. <sup>12,22</sup>
	MF <sup>2,5,6,7,8</sup> two step, or	1106.1 <sup>23</sup> .....	9230 C–2007 .....	D5259–92. <sup>9</sup>	
	Single step, or	1600 <sup>24</sup> .....	9230 C–2007.		
	Plate count .....	p. 143. <sup>3</sup>			
<b>Protozoa</b>					
8. <i>Cryptosporidium</i> .....	Filtration/IMS/FA .....	1622, <sup>25</sup> 1623. <sup>26</sup>			
9. <i>Giardia</i> .....	Filtration/IMS/FA .....	1623. <sup>26</sup>			

**Table IH notes:**

- <sup>1</sup> The method must be specified when results are reported.
- <sup>2</sup> A 0.45-µm membrane filter (MF) or other pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with their growth.
- <sup>3</sup> Microbiological Methods for Monitoring the Environment, Water, and Wastes. EPA/600/8–78/017. 1978. U.S. EPA.
- <sup>4</sup> U.S. Geological Survey Techniques of Water-Resource Investigations, Book 5, Laboratory Analysis, Chapter A4, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples. 1989. USGS.
- <sup>5</sup> Because the MF technique usually yields low and variable recovery from chlorinated wastewaters, the Most Probable Number method will be required to resolve any controversies.
- <sup>6</sup> Tests must be conducted to provide organism enumeration (density). Select the appropriate configuration of tubes/filtrations and dilutions/volumes to account for the quality, character, consistency, and anticipated organism density of the water sample.
- <sup>7</sup> When the MF method has not been used previously to test waters with high turbidity, large numbers of noncoliform bacteria, or samples that may contain organisms stressed by chlorine, a parallel test should be conducted with a multiple-tube technique to demonstrate applicability and comparability of results.
- <sup>8</sup> To assess the comparability of results obtained with individual methods, it is suggested that side-by-side tests be conducted across seasons of the year with the water samples routinely tested in accordance with the most current Standard Methods for the Examination of Water and Wastewater or EPA alternate test procedure (ATP) guidelines.
- <sup>9</sup> Annual Book of ASTM Standards—Water and Environmental Technology. Section 11.02. 2000, 1999, 1996. ASTM International.
- <sup>10</sup> Official Methods of Analysis of AOAC International, 16th Edition, Volume I, Chapter 17. 1995. AOAC International.
- <sup>11</sup> The multiple-tube fermentation test is used in 9221B.2–2006. Lactose broth may be used in lieu of lauryl tryptose broth (LTB), if at least 25 parallel tests are conducted between this broth and LTB using the water samples normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform using lactose broth is less than 10 percent. No requirement exists to run the completed phase on 10 percent of all total coliform-positive tubes on a seasonal basis.
- <sup>12</sup> These tests are collectively known as defined enzyme substrate tests, where, for example, a substrate is used to detect the enzyme β-glucuronidase produced by *E. coli*.
- <sup>13</sup> After prior enrichment in a presumptive medium for total coliform using 9221B.2–2006, all presumptive tubes or bottles showing any amount of gas, growth or acidity within 48 h ± 3 h of incubation shall be submitted to 9221F–2006. Commercially available EC–MUG media or EC media supplemented in the laboratory with 50 µg/mL of MUG may be used.
- <sup>14</sup> Samples shall be enumerated by the multiple-tube or multiple-well procedure. Using multiple-tube procedures, employ an appropriate tube and dilution configuration of the sample as needed and report the Most Probable Number (MPN). Samples tested with Colilert® may be enumerated with the multiple-well procedures, Quanti-Tray® or Quanti-Tray®/2000, and the MPN calculated from the table provided by the manufacturer.
- <sup>15</sup> Colilert-18® is an optimized formulation of the Colilert® for the determination of total coliforms and *E. coli* that provides results within 18 h of incubation at 35 °C, rather than the 24 h required for the Colilert® test, and is recommended for marine water samples.
- <sup>16</sup> Descriptions of the Colilert®, Colilert-18®, and Quanti-Tray® may be obtained from IDEXX Laboratories Inc.
- <sup>17</sup> A description of the mColiBlue24® test may be obtained from Hach Company.
- <sup>18</sup> Subject total coliform positive samples determined by 9222B–2006 or other membrane filter procedure to 9222G–2006 using NA–MUG media.
- <sup>19</sup> Method 1103.1: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using membrane-Thermotolerant *Escherichia coli* Agar (mTEC), EPA–821–R–10–002. March 2010. U.S. EPA.
- <sup>20</sup> Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC), EPA–821–R–14–010. September 2014. U.S. EPA.
- <sup>21</sup> Preparation and use of MI agar with a standard membrane filter procedure is set forth in the article, Brenner et al. 1993. New Medium for the Simultaneous Detection of Total Coliform and *Escherichia coli* in Water. Appl. Environ. Microbiol. 59:3534–3544 and in Method 1604: Total Coliforms and *Escherichia coli* (*E. coli*) in Water by Membrane Filtration by Using a Simultaneous Detection Technique (MI Medium), EPA 821–R–02–024, September 2002, U.S. EPA.
- <sup>22</sup> A description of the Enterolert® test may be obtained from IDEXX Laboratories Inc.
- <sup>23</sup> Method 1106.1: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus-Esculin Iron Agar (mE-EIA), EPA–821–R–09–015. December 2009. U.S. EPA.
- <sup>24</sup> Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-β-D-Glucoside Agar (mEI), EPA–821–R–14–011. September 2014. U.S. EPA.
- <sup>25</sup> Method 1622 uses a filtration, concentration, immunomagnetic separation of oocysts from captured material, immunofluorescence assay to determine concentrations, and confirmation through vital dye staining and differential interference contrast microscopy for the detection of *Cryptosporidium*. Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, EPA–821–R–05–001. December 2005. U.S. EPA.
- <sup>26</sup> Method 1623 uses a filtration, concentration, immunomagnetic separation of oocysts and cysts from captured material, immunofluorescence assay to determine concentrations, and confirmation through vital dye staining and differential interference contrast microscopy for the simultaneous detection of *Cryptosporidium* and *Giardia* oocysts and cysts. Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/FA. EPA–821–R–05–002. December 2005. U.S. EPA.
- <sup>27</sup> On a monthly basis, at least ten blue colonies from the medium must be verified using Lauryl Tryptose Broth and EC broth, followed by count adjustment based on these results; and representative non-blue colonies should be verified using Lauryl Tryptose Broth. Where possible, verifications should be done from randomized sample sources.

(b) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at EPA’s Water Docket, EPA West, 1301 Constitution Avenue NW., Room 3334, Washington, DC 20004, Telephone: 202–566–2426, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For

information on the availability of this material at NARA, call 202–741–6030, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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(8) \* \* \*

(iv) Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-β-D-Glucoside Agar (mEI). September 2014. EPA–821–R–14–011. Table IA, Note 25; Table IH, Note 24.

(v) Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC). September 2014. EPA–821–R–14–010. Table IA, Note 22; Table IH, Note 20.

\* \* \* \* \*

(xiii) Method 1680: Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple-Tube Fermentation using Lauryl Tryptose Broth (LTB) and EC Medium.

September 2014. EPA-821-R-14-009. Table IA, Note 15.

\* \* \* \* \*

(xv) Method 1682: *Salmonella* in Sewage Sludge (Biosolids) by Modified Semisolid Rappaport-Vassiliadis (MSRV) Medium. September 2014. EPA 821-R-14-012. Table IA, Note 23.

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(10) \* \* \*

(viii) 2120, Color. 2011. Table IB.  
 (ix) 2130, Turbidity. 2011. Table IB.  
 (x) 2310, Acidity. 2011. Table IB.  
 (xi) 2320, Alkalinity. 2011. Table IB.  
 (xii) 2340, Hardness. 2011. Table IB.  
 (xiii) 2510, Conductivity. 2011. Table IB.

(xiv) 2540, Solids. 2011. Table IB.  
 (xv) 2550, Temperature. 2010. Table IB.

(xvi) 3111, Metals by Flame Atomic Absorption Spectrometry. 2011. Table IB.

(xvii) 3112, Metals by Cold-Vapor Atomic Absorption Spectrometry. 2011. Table IB.

(xviii) 3113, Metals by Electrothermal Atomic Absorption Spectrometry. 2010. Table IB.

(xix) 3114, Arsenic and Selenium by Hydride Generation/Atomic Absorption Spectrometry. 2011. Table IB.

(xx) 3120, Metals by Plasma Emission Spectroscopy. 2011. Table IB.

(xxi) 3125, Metals by Inductively Coupled Plasma-Mass Spectrometry. 2011. Table IB.

(xxii) 3500-Al, Aluminum. 2011. Table IB.

(xxiii) 3500-As, Arsenic. 2011. Table IB.

(xxiv) 3500-Ca, Calcium. 2011. Table IB.

(xxv) 3500-Cr, Chromium. 2011. Table IB.

(xxvi) 3500-Cu, Copper. 2011. Table IB.

(xxvii) 3500-Fe, Iron. 2011. Table IB.

(xxviii) 3500-Pb, Lead. 2011. Table IB.

(xxix) 3500-Mn, Manganese. 2011. Table IB.

(xxx) 3500-K, Potassium. 2011. Table IB.

(xxxi) 3500-Na, Sodium. 2011. Table IB.

(xxxii) 3500-V, Vanadium. 2011. Table IB.

(xxxiii) 3500-Zn, Zinc. 2011. Table IB.

(xxxiv) 4110, Determination of Anions by Ion Chromatography. 2011. Table IB.

(xxxv) 4140, Inorganic Anions by Capillary Ion Electrophoresis. 2011. Table IB.

(xxxvi) 4500-B, Boron. 2011. Table IB.

(xxxvii) 4500-Cl<sup>-</sup>, Chloride. 2011. Table IB.

(xxxviii) 4500-Cl, Chlorine (Residual). 2011. Table IB.

(xxxix) 4500-CN<sup>-</sup>, Cyanide. 2011. Table IB.

(xl) 4500-F<sup>-</sup>, Fluoride. 2011. Table IB.

(xli) 4500-H<sup>+</sup>, pH Value. 2011. Table IB.

(xlii) 4500-NH<sub>3</sub>, Nitrogen (Ammonia). 2011. Table IB.

(xliii) 4500-NO<sub>2</sub><sup>-</sup>, Nitrogen (Nitrite). 2011. Table IB.

(xliv) 4500-NO<sub>3</sub><sup>-</sup>, Nitrogen (Nitrate). 2011. Table IB.

(xlv) 4500-N<sub>org</sub>, Nitrogen (Organic). 2011. Table IB.

(xlvi) 4500-O, Oxygen (Dissolved). 2011. Table IB.

(xlvii) 4500-P, Phosphorus. 2011. Table IB.

(xlviii) 4500-SiO<sub>2</sub>, Silica. 2011. Table IB.

(xlix) 4500-S<sup>2-</sup>, Sulfide. 2011. Table IB.

(l) 4500-SO<sub>3</sub><sup>2-</sup>, Sulfite. 2011. Table IB.

(li) 4500-SO<sub>4</sub><sup>2-</sup>, Sulfate. 2011. Table IB.

(lii) 5210, Biochemical Oxygen Demand (BOD). 2011. Table IB.

(liii) 5220, Chemical Oxygen Demand (COD). 2011. Table IB.

(liv) 5310, Total Organic Carbon (TOC). 2011. Table IB.

(lv) 5520, Oil and Grease. 2011. Table IB.

(lvi) 5530, Phenols. 2010. Table IB.

(lvii) 5540, Surfactants. 2011. Table IB.

(lviii) 6200, Volatile Organic Compounds. 2011. Table IC.

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(lxi) 6440, Polynuclear Aromatic Hydrocarbons. 2005. Table IC.

(lxii) 6630, Organochlorine Pesticides. 2007. Table ID.

(lxiii) 6640, Acidic Herbicide Compounds. 2006. Table ID.

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(lxviii) 9222, Membrane Filter Technique for Members of the Coliform Group. 2006. Table IA; Table IH, Note 18.

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(v) ASTM D511-09, Standard Test Methods for Calcium and Magnesium in Water. May 2009. Table IB.

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(viii) ASTM D516-11, Standard Test Method for Sulfate Ion in Water, September 2011. Table IB.

(ix) ASTM D858-12, Standard Test Methods for Manganese in Water, September 2012. Table IB.

(x) ASTM D859-10, Standard Test Method for Silica in Water. July 2010. Table IB.

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(xii) ASTM D1067-11, Standard Test Methods for Acidity or Alkalinity of Water. April 2011. Table IB.

(xiii) ASTM D1068-10, Standard Test Methods for Iron in Water. October 2010. Table IB.

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(xv) ASTM D1126-12, Standard Test Method for Hardness in Water. March 2012. Table IB.

(xvi) ASTM D1179-10, Standard Test Methods for Fluoride Ion in Water. July 2010. Table IB.

(xvii) ASTM D1246-10, Standard Test Method for Bromide Ion in Water. July 2010. Table IB.

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(xxii) ASTM D1687-12 (Approved September 1, 2012), Standard Test Methods for Chromium in Water. August 2007. Table IB.

(xxiii) ASTM D1688-12, Standard Test Methods for Copper in Water. September 2012. Table IB.

(xxiv) ASTM D1691-12, Standard Test Methods for Zinc in Water. September 2012. Table IB.

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(xxx) ASTM D1976-12, Standard Test Method for Elements in Water by Inductively-Coupled Argon Plasma Atomic Emission Spectroscopy. March 2012. Table IB.

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(xxxv) ASTM D3223-12, Standard Test Method for Total Mercury in Water. September 2012. Table IB.

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(xxxvii) ASTM D3373-12, Standard Test Method for Vanadium in Water. September 2012. Table IB.

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(xxxix) ASTM D3557-12, Standard Test Method for Cadmium in Water. September 2012. Table IB.

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(xlii) ASTM D3590-11, Standard Test Methods for Total Kjeldahl Nitrogen in Water. April 2011. Table IB.

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(l) ASTM D4382-12, Standard Test Method for Barium in Water, Atomic Absorption Spectrophotometry, Graphite Furnace. September 2012. Table IB.

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(lii) ASTM D4658-09, Standard Test Method for Sulfide Ion in Water. May 2009. Table IB.

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(lv) ASTM D5257-11, Standard Test Method for Dissolved Hexavalent Chromium in Water by Ion Chromatography. April 2011. Table IB.

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(lviii) ASTM D5673-10, Standard Test Method for Elements in Water by

Inductively Coupled Plasma—Mass Spectrometry. September 2010. Table IB.

(lix) ASTM D5(19)907–13, Standard Test Method for Filterable Matter (Total Dissolved Solids) and Nonfilterable Matter (Total Suspended Solids) in Water. July 2013. Table IB.

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(lxi) ASTM. D6508–10, Standard Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte. October 2010. Table IB, Note 54.

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(lxvi) ASTM. D7284–13, Standard Test Method for Total Cyanide in Water by Micro Distillation followed by Flow Injection Analysis with Gas Diffusion Separation and Amperometric Detection. July 2013. Table IB.

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(lxviii) ASTM. D7511–12, Standard Test Method for Total Cyanide by Segmented Flow Injection Analysis, In-Line Ultraviolet Digestion and Amperometric Detection. January 2012. Table IB.

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(viii) Method 10242, Hach Company TNTplus 880 Total Kjeldahl Nitrogen Method 10242, Simplified Spectrophotometric Measurement of Total Kjeldahl Nitrogen in Water and Wastewater. Revision 1.1, January 10, 2013. Table IB, Note 76.

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(ii) Colilert-18. 2013. Table IA, Notes 17 and 18; Table IH, Notes 14, 15 and 16.

(iii) Enterolert. 2013. Table IA, Note 24; Table IH, Note 12.

(iv) Quanti-Tray Insert and Most Probable Number (MPN) Table. 2013. Table IA, Note 18; Table IH, Notes 14 and 16.

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(i) NCASI Method TNTP–W10900, Total Nitrogen and Total Phosphorus in Pulp and Paper Biologically Treated Effluent by Alkaline Persulfate Digestion. June 2011. Table IB, Note 77.

(ii) NCASI Technical Bulletin No.

253, An Investigation of Improved Procedures for Measurement of Mill Effluent and Receiving Water Color. December 1971. Table IB, Note 18.

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(iii) Methods for Determination of Inorganic Substances in Water and Fluvial Sediments, Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A1. 1989. Table IB, Note 2.

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(viii) OFR 93–125, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments. 1993. Table IB, Note 51; Table IC, Note 9.

(ix) OFR 93–449, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Chromium in Water by Graphite Furnace Atomic Absorption Spectrophotometry. 1993. Table IB, Note 46.

(x) OFR 94–37, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Triazine and Other Nitrogen-containing Compounds by Gas Chromatography With Nitrogen Phosphorus Detectors. 1994. Table ID, Note 9.

(xi) OFR 95–181, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Pesticides in Water by C–18 Solid-Phase Extraction and Capillary-Column Gas Chromatography/Mass Spectrometry With Selected-Ion Monitoring. 1995. Table ID, Note 11.

(xii) OFR 97–198, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Molybdenum in Water by Graphite Furnace Atomic Absorption Spectrophotometry. 1997. Table IB, Note 47.

(xiii) OFR 98–165, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Elements in Whole-Water Digests Using Inductively Coupled Plasma-Optical Emission Spectrometry and Inductively Coupled Plasma-Mass Spectrometry. 1998. Table IB, Note 50.

(xiv) OFR 98–639, Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—

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Analysis, Chapter A4, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples. 1989. Table IA, Note 4; Table IH, Note 4.  
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 (xx) Water-Resources Investigation Report 01–4134, Methods of Analysis by

the U.S. Geological Survey National Water Quality Laboratory—Determination of Pesticides in Water by Graphitized Carbon-Based Solid-Phase Extraction and High-Performance Liquid Chromatography/Mass Spectrometry. 2001. Table ID, Note 12.  
 (xxi) Water Temperature—Influential Factors, Field Measurement and Data Presentation, Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 1, Chapter D1. 1975. Table IB, Note 32.  
 \* \* \* \* \*  
 (c) Under certain circumstances, the Director may establish limitations on the discharge of a parameter for which there is no test procedure in this part or in 40 CFR parts 405 through 499. In these instances the test procedure shall be specified by the Director.  
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 (e) \* \* \*

TABLE II—REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES

Parameter number/name	Container <sup>1</sup>	Preservation <sup>2,3</sup>	Maximum holding time <sup>4</sup>
<b>Table IA—Bacterial Tests</b>			
1–5. Coliform, total, fecal, and <i>E. coli</i> .	PA, G	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22,23</sup>
6. Fecal streptococci	PA, G	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>
7. Enterococci	PA, G	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>
8. <i>Salmonella</i>	PA, G	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>
<b>Table IA—Aquatic Toxicity Tests</b>			
9–12. Toxicity, acute and chronic ..	P, FP, G	Cool, ≤6 °C <sup>16</sup>	36 hours.
<b>Table IB—Inorganic Tests</b>			
1. Acidity	P, FP, G	Cool, ≤6 °C <sup>18</sup>	14 days.
2. Alkalinity	P, FP, G	Cool, ≤6 °C <sup>18</sup>	14 days.
4. Ammonia	P, FP, G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
9. Biochemical oxygen demand	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
10. Boron	P, FP, or Quartz	HNO <sub>3</sub> to pH <2	6 months.
11. Bromide	P, FP, G	None required	28 days.
14. Biochemical oxygen demand, carbonaceous.	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
15. Chemical oxygen demand	P, FP, G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
16. Chloride	P, FP, G	None required	28 days.
17. Chlorine, total residual	P, G	None required	Analyze within 15 minutes.
21. Color	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
23–24. Cyanide, total or available (or CATC) and free.	P, FP, G	Cool, ≤6 °C, <sup>18</sup> NaOH to pH >10, <sup>5,6</sup> reducing agent if oxidizer present.	14 days.
25. Fluoride	P	None required	28 days.
27. Hardness	P, FP, G	HNO <sub>3</sub> or H <sub>2</sub> SO <sub>4</sub> to pH <2	6 months.
28. Hydrogen ion (pH)	P, FP, G	None required	Analyze within 15 minutes.
31, 43. Kjeldahl and organic N	P, FP, G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
<b>Table IB—Metals<sup>7</sup></b>			
18. Chromium VI	P, FP, G	Cool, ≤6 °C, <sup>18</sup> pH = 9.3–9.7 <sup>20</sup>	28 days.
35. Mercury (CVAA)	P, FP, G	HNO <sub>3</sub> to pH <2	28 days.
35. Mercury (CVAFS)	FP, G; and FP-lined cap <sup>17</sup>	5 mL/L 12N HCl or 5 mL/L BrCl <sup>17</sup>	90 days. <sup>17</sup>
3, 5–8, 12, 13, 19, 20, 22, 26, 29, 30, 32–34, 36, 37, 45, 47, 51, 52, 58–60, 62, 63, 70–72, 74, 75. Metals, except boron, chromium VI, and mercury.	P, FP, G	HNO <sub>3</sub> to pH <2, or at least 24 hours prior to analysis <sup>19</sup> .	6 months.

TABLE II—REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES—Continued

Parameter number/name	Container <sup>1</sup>	Preservation <sup>2,3</sup>	Maximum holding time <sup>4</sup>
38. Nitrate	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
39. Nitrate-nitrite	P, FP, G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
40. Nitrite	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
41. Oil and grease	G	Cool to ≤6 °C, <sup>18</sup> HCl or H <sub>2</sub> SO <sub>4</sub> to pH <2.	28 days.
42. Organic Carbon	P, FP, G	Cool to ≤6 °C, <sup>18</sup> HCl, H <sub>2</sub> SO <sub>4</sub> , or H <sub>3</sub> PO <sub>4</sub> to pH <2.	28 days.
44. Orthophosphate	P, FP, G	Cool, to ≤6 °C <sup>18,24</sup>	Filter within 15 minutes; Analyze within 48 hours.
46. Oxygen, Dissolved Probe	G, Bottle and top	None required	Analyze within 15 minutes.
47. Winkler	G, Bottle and top	Fix on site and store in dark	8 hours.
48. Phenols	G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
49. Phosphorous (elemental)	G	Cool, ≤6 °C <sup>18</sup>	48 hours.
50. Phosphorous, total	P, FP, G	Cool, ≤6 °C, <sup>18</sup> H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days.
53. Residue, total	P, FP, G	Cool, ≤6 °C <sup>18</sup>	7 days.
54. Residue, Filterable	P, FP, G	Cool, ≤6 °C <sup>18</sup>	7 days.
55. Residue, Nonfilterable (TSS)	P, FP, G	Cool, ≤6 °C <sup>18</sup>	7 days.
56. Residue, Settleable	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
57. Residue, Volatile	P, FP, G	Cool, ≤6 °C <sup>18</sup>	7 days.
61. Silica	P or Quartz	Cool, ≤6 °C <sup>18</sup>	28 days.
64. Specific conductance	P, FP, G	Cool, ≤6 °C <sup>18</sup>	28 days.
65. Sulfate	P, FP, G	Cool, ≤6 °C <sup>18</sup>	28 days.
66. Sulfide	P, FP, G	Cool, ≤6 °C, <sup>18</sup> add zinc acetate plus sodium hydroxide to pH >9.	7 days.
67. Sulfite	P, FP, G	None required	Analyze within 15 minutes.
68. Surfactants	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.
69. Temperature	P, FP, G	None required	Analyze within 15 minutes.
73. Turbidity	P, FP, G	Cool, ≤6 °C <sup>18</sup>	48 hours.

Table IC—Organic Tests<sup>8</sup>

13, 18–20, 22, 24, 25, 27,28, 34–37, 39–43, 45–47, 56, 76, 104, 105, 108–111, 113. Purgeable Halocarbons.	G, FP-lined septum	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , <sup>5</sup> HCl to pH 2.	14 days.
26. 2-Chloroethylvinyl ether	G, FP-lined septum	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	14 days.
6, 57, 106. Purgeable aromatic hydrocarbons.	G, FP-lined septum	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , <sup>5</sup> HCl to pH 2 <sup>9</sup> .	14 days. <sup>9</sup>
3, 4. Acrolein and acrylonitrile	G, FP-lined septum	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , pH to 4–5 <sup>10</sup> .	14 days. <sup>10</sup>
23, 30, 44, 49, 53, 77, 80, 81, 98, 100, 112. Phenols <sup>11</sup> .	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ..	7 days until extraction, 40 days after extraction.
7, 38. Benzidines <sup>11,12</sup>	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	7 days until extraction. <sup>13</sup>
14, 17, 48, 50–52. Phthalate esters <sup>11</sup> .	G, FP-lined cap	Cool, ≤6 °C <sup>18</sup>	7 days until extraction, 40 days after extraction.
82–84. Nitrosamines <sup>11,14</sup>	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> store in dark, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup> .	7 days until extraction, 40 days after extraction.
88–94. PCBs <sup>11</sup>	G, FP-lined cap	Cool, ≤6 °C <sup>18</sup>	1 year until extraction, 1 year after extraction.
54, 55, 75, 79. Nitroaromatics and isophorone <sup>11</sup> .	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> store in dark, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup> .	7 days until extraction, 40 days after extraction.
1, 2, 5, 8–12, 32, 33, 58, 59, 74, 78, 99, 101. Polynuclear aromatic hydrocarbons <sup>11</sup> .	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> store in dark, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup> .	7 days until extraction, 40 days after extraction.
15, 16, 21, 31, 87. Haloethers <sup>11</sup> ...	G, FP-lined cap	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	7 days until extraction, 40 days after extraction.
29, 35–37, 63–65, 107. Chlorinated hydrocarbons <sup>11</sup> .	G, FP-lined cap	Cool, ≤6 °C <sup>18</sup>	7 days until extraction, 40 days after extraction.
60–62, 66–72, 85, 86, 95–97, 102, 103. CDDs/CDFs <sup>11</sup> .	G	See footnote 11	See footnote 11.
Aqueous Samples: Field and Lab Preservation.	G	Cool, ≤6 °C, <sup>18</sup> 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , <sup>5</sup> pH <9.	1 year.
Solids and Mixed-Phase Samples: Field Preservation.	G	Cool, ≤6 °C <sup>18</sup>	7 days.
Tissue Samples: Field Preservation.	G	Cool, ≤6 °C <sup>18</sup>	24 hours.
Solids, Mixed-Phase, and Tissue Samples: Lab Preservation.	G	Freeze, ≤ –10 °C	1 year.
114–118. Alkylated phenols	G	Cool, <6 °C, H <sub>2</sub> SO <sub>4</sub> to pH <2	28 days until extraction, 40 days after extraction.

TABLE II—REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES—Continued

Parameter number/name	Container <sup>1</sup>	Preservation <sup>2,3</sup>	Maximum holding time <sup>4</sup>
119. Adsorbable Organic Halides (AOX).	G .....	Cool, <6 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , HNO <sub>3</sub> to pH <2.	Hold at least 3 days, but not more than 6 months.
120. Chlorinated Phenolics .....	G, FP-lined cap .....	Cool, <6 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> to pH <2.	30 days until acetylation, 30 days after acetylation.

## Table ID—Pesticides Tests

1–70. Pesticides <sup>11</sup> .....	G, FP-lined cap .....	Cool, ≤6 °C, <sup>18</sup> pH 5–9 <sup>15</sup> .....	7 days until extraction, 40 days after extraction.
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## Table IE—Radiological Tests

1–5. Alpha, beta, and radium .....	P, FP, G .....	HNO <sub>3</sub> to pH <2 .....	6 months.
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## Table IH—Bacterial Tests

1–4. Coliform, total, fecal .....	PA, G .....	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22,23</sup>
5. <i>E. coli</i> .....	PA, G .....	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>
6. Fecal streptococci .....	PA, G .....	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>
7. Enterococci .....	PA, G .....	Cool, <10 °C, 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <sup>5</sup>	8 hours. <sup>22</sup>

## Table IH—Protozoan Tests

8. <i>Cryptosporidium</i> .....	LDPE; field filtration .....	1–10 °C .....	96 hours. <sup>21</sup>
9. <i>Giardia</i> .....	LDPE; field filtration .....	1–10 °C .....	96 hours. <sup>21</sup>

<sup>1</sup> “P” is for polyethylene; “FP” is fluoropolymer (polytetrafluoroethylene (PTFE); Teflon®), or other fluoropolymer, unless stated otherwise in this Table II; “G” is glass; “PA” is any plastic that is made of a sterilizable material (polypropylene or other autoclavable plastic); “LDPE” is low density polyethylene.

<sup>2</sup> Except where noted in this Table II and the method for the parameter, preserve each grab sample within 15 minutes of collection. For a composite sample collected with an automated sampler (e.g., using a 24-hour composite sampler; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), refrigerate the sample at ≤6 °C during collection unless specified otherwise in this Table II or in the method(s). For a composite sample to be split into separate aliquots for preservation and/or analysis, maintain the sample at ≤6 °C, unless specified otherwise in this Table II or in the method(s), until collection, splitting, and preservation is completed. Add the preservative to the sample container prior to sample collection when the preservative will not compromise the integrity of a grab sample, a composite sample, or aliquot split from a composite sample within 15 minutes of collection. If a composite measurement is required but a composite sample would compromise sample integrity, individual grab samples must be collected at prescribed time intervals (e.g., 4 samples over the course of a day, at 6-hour intervals). Grab samples must be analyzed separately and the concentrations averaged. Alternatively, grab samples may be collected in the field and composited in the laboratory if the compositing procedure produces results equivalent to results produced by arithmetic averaging of results of analysis of individual grab samples. For examples of laboratory compositing procedures, see EPA Method 1664 Rev. A (oil and grease) and the procedures at 40 CFR 141.24(f)(14)(iv) and (v) (volatile organics).

<sup>3</sup> When any sample is to be shipped by common carrier or sent via the U.S. Postal Service, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR part 172). The person offering such material for transportation is responsible for ensuring such compliance. For the preservation requirement of Table II, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: Hydrochloric acid (HCl) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); Nitric acid (HNO<sub>3</sub>) in water solutions at concentrations of 0.15% by weight or less (pH about 1.62 or greater); Sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) in water solutions at concentrations of 0.35% by weight or less (pH about 1.15 or greater); and Sodium hydroxide (NaOH) in water solutions at concentrations of 0.080% by weight or less (pH about 12.30 or less).

<sup>4</sup> Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before the start of analysis and still be considered valid. Samples may be held for longer periods only if the permittee or monitoring laboratory have data on file to show that, for the specific types of samples under study, the analytes are stable for the longer time, and has received a variance from the Regional ATP Coordinator under § 136.3(e). For a grab sample, the holding time begins at the time of collection. For a composite sample collected with an automated sampler (e.g., using a 24-hour composite sampler; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), the holding time begins at the time of the end of collection of the composite sample. For a set of grab samples composited in the field or laboratory, the holding time begins at the time of collection of the last grab sample in the set. Some samples may not be stable for the maximum time period given in the table. A permittee or monitoring laboratory is obligated to hold the sample for a shorter time if it knows that a shorter time is necessary to maintain sample stability. See § 136.3(e) for details. The date and time of collection of an individual grab sample is the date and time at which the sample is collected. For a set of grab samples to be composited, and that are all collected on the same calendar date, the date of collection is the date on which the samples are collected. For a set of grab samples to be composited, and that are collected across two calendar dates, the date of collection is the dates of the two days; e.g., November 14–15. For a composite sample collected automatically on a given date, the date of collection is the date on which the sample is collected. For a composite sample collected automatically, and that is collected across two calendar dates, the date of collection is the dates of the two days; e.g., November 14–15. For static-renewal toxicity tests, each grab or composite sample may also be used to prepare test solutions for renewal at 24 h, 48 h, and/or 72 h after first use, if stored at 0–6 °C, with minimum head space.

<sup>5</sup> ASTM D7365–09a specifies treatment options for samples containing oxidants (e.g., chlorine) for cyanide analyses. Also, Section 9060A of Standard Methods for the Examination of Water and Wastewater (20th and 21st editions) addresses dechlorination procedures for microbiological analyses.

<sup>6</sup> Sampling, preservation and mitigating interferences in water samples for analysis of cyanide are described in ASTM D7365–09a. There may be interferences that are not mitigated by the analytical test methods or D7365–09a. Any technique for removal or suppression of interference may be employed, provided the laboratory demonstrates that it more accurately measures cyanide through quality control measures described in the analytical test method. Any removal or suppression technique not described in D7365–09a or the analytical test method must be documented along with supporting data.

<sup>7</sup> For dissolved metals, filter grab samples within 15 minutes of collection and before adding preservatives. For a composite sample collected with an automated sampler (e.g., using a 24-hour composite sampler; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), filter the sample within 15 minutes after completion of collection and before adding preservatives. If it is known or suspected that dissolved sample integrity will be compromised during collection of a composite sample collected automatically over time (e.g., by interchange of a metal between dissolved and suspended forms), collect and filter grab samples to be composited (footnote 2) in place of a composite sample collected automatically.

<sup>8</sup> Guidance applies to samples to be analyzed by GC, LC, or GC/MS for specific compounds.

<sup>9</sup> If the sample is not adjusted to pH 2, then the sample must be analyzed within seven days of sampling.

<sup>10</sup> The pH adjustment is not required if acrolein will not be measured. Samples for acrolein receiving no pH adjustment must be analyzed within 3 days of sampling.

<sup>11</sup> When the extractable analytes of concern fall within a single chemical category, the specified preservative and maximum holding times should be observed for optimum safeguard of sample integrity (*i.e.*, use all necessary preservatives and hold for the shortest time listed). When the analytes of concern fall within two or more chemical categories, the sample may be preserved by cooling to  $\leq 6$  °C, reducing residual chlorine with 0.008% sodium thiosulfate, storing in the dark, and adjusting the pH to 6–9; samples preserved in this manner may be held for seven days before extraction and for forty days after extraction. Exceptions to this optional preservation and holding time procedure are noted in footnote 5 (regarding the requirement for thiosulfate reduction), and footnotes 12, 13 (regarding the analysis of benzidine).

<sup>12</sup> If 1,2-diphenylhydrazine is likely to be present, adjust the pH of the sample to  $4.0 \pm 0.2$  to prevent rearrangement to benzidine.

<sup>13</sup> Extracts may be stored up to 30 days at  $< 0$  °C.

<sup>14</sup> For the analysis of diphenylnitrosamine, add 0.008%  $\text{Na}_2\text{S}_2\text{O}_3$  and adjust pH to 7–10 with NaOH within 24 hours of sampling.

<sup>15</sup> The pH adjustment may be performed upon receipt at the laboratory and may be omitted if the samples are extracted within 72 hours of collection. For the analysis of aldrin, add 0.008%  $\text{Na}_2\text{S}_2\text{O}_3$ .

<sup>16</sup> Place sufficient ice with the samples in the shipping container to ensure that ice is still present when the samples arrive at the laboratory. However, even if ice is present when the samples arrive, immediately measure the temperature of the samples and confirm that the preservation temperature maximum has not been exceeded. In the isolated cases where it can be documented that this holding temperature cannot be met, the permittee can be given the option of on-site testing or can request a variance. The request for a variance should include supportive data which show that the toxicity of the effluent samples is not reduced because of the increased holding temperature. Aqueous samples must not be frozen. Hand-delivered samples used on the day of collection do not need to be cooled to 0 to 6 °C prior to test initiation.

<sup>17</sup> Samples collected for the determination of trace level mercury ( $< 100$  ng/L) using EPA Method 1631 must be collected in tightly-capped fluoropolymer or glass bottles and preserved with BrCl or HCl solution within 48 hours of sample collection. The time to preservation may be extended to 28 days if a sample is oxidized in the sample bottle. A sample collected for dissolved trace level mercury should be filtered in the laboratory within 24 hours of the time of collection. However, if circumstances preclude overnight shipment, the sample should be filtered in a designated clean area in the field in accordance with procedures given in Method 1669. If sample integrity will not be maintained by shipment to and filtration in the laboratory, the sample must be filtered in a designated clean area in the field within the time period necessary to maintain sample integrity. A sample that has been collected for determination of total or dissolved trace level mercury must be analyzed within 90 days of sample collection.

<sup>18</sup> Aqueous samples must be preserved at  $\leq 6$  °C, and should not be frozen unless data demonstrating that sample freezing does not adversely impact sample integrity is maintained on file and accepted as valid by the regulatory authority. Also, for purposes of NPDES monitoring, the specification of " $\leq 6$  °C" is used in place of the "4 °C" and "<4 °C" sample temperature requirements listed in some methods. It is not necessary to measure the sample temperature to three significant figures (1/100th of 1 degree); rather, three significant figures are specified so that rounding down to 6 °C may not be used to meet the  $\leq 6$  °C requirement. The preservation temperature does not apply to samples that are analyzed immediately (less than 15 minutes).

<sup>19</sup> An aqueous sample may be collected and shipped without acid preservation. However, acid must be added at least 24 hours before analysis to dissolve any metals that adsorb to the container walls. If the sample must be analyzed within 24 hours of collection, add the acid immediately (see footnote 2). Soil and sediment samples do not need to be preserved with acid. The allowances in this footnote supersede the preservation and holding time requirements in the approved metals methods.

<sup>20</sup> To achieve the 28-day holding time, use the ammonium sulfate buffer solution specified in EPA Method 218.6. The allowance in this footnote supersedes preservation and holding time requirements in the approved hexavalent chromium methods, unless this supersession would compromise the measurement, in which case requirements in the method must be followed.

<sup>21</sup> Holding time is calculated from time of sample collection to elution for samples shipped to the laboratory in bulk and calculated from the time of sample filtration to elution for samples filtered in the field.

<sup>22</sup> Sample analysis should begin as soon as possible after receipt; sample incubation must be started no later than 8 hours from time of collection.

<sup>23</sup> For fecal coliform samples for sewage sludge (biosolids) only, the holding time is extended to 24 hours for the following sample types using either EPA Method 1680 (LTB–EC) or 1681 (A–1): Class A composted, Class B aerobically digested, and Class B anaerobically digested.

<sup>24</sup> The immediate filtration requirement in orthophosphate measurement is to assess the dissolved or bio-available form of orthophosphorus (*i.e.*, that which passes through a 0.45-micron filter), hence the requirement to filter the sample immediately upon collection (*i.e.*, within 15 minutes of collection).

■ 5. Section 136.4 is amended by revising paragraphs (a) introductory text, (b), and (c) to read as follows:

**§ 136.4 Application for and approval of alternate test procedures for nationwide use.**

(a) A written application for review of an alternate test procedure (alternate method) for nationwide use may be made by letter via email or by hard copy in triplicate to the National Alternate Test Procedure (ATP) Program Coordinator (National Coordinator), Office of Science and Technology (4303T), Office of Water, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Any application for an ATP under this paragraph (a) shall:

\* \* \* \* \*

(b) The National Coordinator may request additional information and analyses from the applicant in order to evaluate whether the alternate test

procedure satisfies the applicable requirements of this part.

(c) *Approval for nationwide use.* (1) After a review of the application and any additional analyses requested from the applicant, the National Coordinator will notify the applicant, in writing, of whether the National Coordinator will recommend approval or disapproval of the alternate test procedure for nationwide use in CWA programs. If the application is not recommended for approval, the National Coordinator may specify what additional information might lead to a reconsideration of the application and notify the Regional Alternate Test Procedure Coordinators of the disapproval recommendation. Based on the National Coordinator's recommended disapproval of a proposed alternate test procedure and an assessment of any current approvals for limited uses for the unapproved method, the Regional ATP Coordinator

may decide to withdraw approval of the method for limited use in the Region.

(2) Where the National Coordinator has recommended approval of an applicant's request for nationwide use of an alternate test procedure, the National Coordinator will notify the applicant. The National Coordinator will also notify the Regional ATP Coordinators that they may consider approval of this alternate test procedure for limited use in their Regions based on the information and data provided in the application until the alternate test procedure is approved by publication in a final rule in the **Federal Register**.

(3) EPA will propose to amend this part to include the alternate test procedure in § 136.3. EPA shall make available for review all the factual bases for its proposal, including the method, any performance data submitted by the applicant and any available EPA analysis of those data.

(4) Following public comment, EPA shall publish in the **Federal Register** a

final decision on whether to amend this part to include the alternate test procedure as an approved analytical method for nationwide use.

(5) Whenever the National Coordinator has recommended approval of an applicant's ATP request for nationwide use, any person may request an approval of the method for limited use under § 136.5 from the EPA Region.

■ 6. Section 136.5 is amended by revising paragraphs (a), (b), (c)(1), and (d) to read as follows:

**§ 136.5 Approval of alternate test procedures for limited use.**

(a) Any person may request the Regional ATP Coordinator to approve the use of an alternate test procedure in the Region.

(b) When the request for the use of an alternate test procedure concerns use in a State with an NPDES permit program approved pursuant to section 402 of the Act, the requestor shall first submit an application for limited use to the Director of the State agency having responsibility for issuance of NPDES permits within such State (*i.e.*, permitting authority). The Director will forward the application to the Regional ATP Coordinator with a recommendation for or against approval.

(c) \* \* \*

(1) Provide the name and address of the applicant and the applicable ID number of the existing or pending permit(s) and issuing agency for which use of the alternate test procedure is requested, and the discharge serial number.

\* \* \* \* \*

(d) *Approval for limited use.* (1) The Regional ATP Coordinator will review the application and notify the applicant and the appropriate State agency of approval or rejection of the use of the alternate test procedure. The approval may be restricted to use only with respect to a specific discharge or facility (and its laboratory) or, at the discretion of the Regional ATP Coordinator, to all dischargers or facilities (and their associated laboratories) specified in the approval for the Region. If the application is not approved, the Regional ATP Coordinator shall specify what additional information might lead to a reconsideration of the application.

(2) The Regional ATP Coordinator will forward a copy of every approval and rejection notification to the National Alternate Test Procedure Coordinator.

■ 7. In § 136.6:

■ a. Revise paragraphs (b)(1) and (2) introductory text.

■ b. Remove paragraph (b)(4)(xvii).

■ c. Redesignate paragraphs (b)(4)(xviii) through the first occurrence of (xxii) as paragraphs (b)(4)(xvii) through (xxi), respectively and retaining the second occurrence of paragraph (b)(4)(xxii).

■ d. Add paragraph (c).

The revisions and addition read as follows:

**§ 136.6 Method modifications and analytical requirements.**

\* \* \* \* \*

(b) *Method modifications.* (1) If the underlying chemistry and determinative technique in a modified method are essentially the same as an approved Part 136 method, then the modified method is an equivalent and acceptable alternative to the approved method provided the requirements of this section are met. However, those who develop or use a modification to an approved (Part 136) method must document that the performance of the modified method, in the matrix to which the modified method will be applied, is equivalent to the performance of the approved method. If such a demonstration cannot be made and documented, then the modified method is not an acceptable alternative to the approved method. Supporting documentation must, if applicable, include the routine initial demonstration of capability and ongoing QC including determination of precision and accuracy, detection limits, and matrix spike recoveries. Initial demonstration of capability typically includes analysis of four replicates of a mid-level standard and a method detection limit study. Ongoing quality control typically includes method blanks, mid-level laboratory control samples, and matrix spikes (QC is as specified in the method). The method is considered equivalent if the quality control requirements in the reference method are achieved. Where the laboratory is using a vendor-supplied method, it is the QC criteria in the reference method, not the vendor's method, that must be met to show equivalency. Where a sample preparation step is required (*i.e.*, digestion, distillation), QC tests are to be run using standards treated in the same way as the samples. The method user's Standard Operating Procedure (SOP) must clearly document the modifications made to the reference method. Examples of allowed method modifications are listed in this section. If the method user is uncertain whether a method modification is allowed, the Regional ATP Coordinator or Director should be contacted for approval *prior* to implementing the modification. The method user should also complete

necessary performance checks to verify that acceptable performance is achieved with the method modification *prior* to analyses of compliance samples.

(2) *Requirements.* The modified method must meet or exceed performance of the approved method(s) for the analyte(s) of interest, as documented by meeting the initial and ongoing quality control requirements in the method.

\* \* \* \* \*

(c) The permittee must notify their permitting authority of the intent to use a modified method. Such notification should be of the form "Method xxx has been modified within the flexibility allowed in 40 CFR 136.6." The permittee may indicate the specific paragraph of § 136.6 allowing the method modification. Specific details of the modification need not be provided, but must be documented in the Standard Operating Procedure (SOP) and maintained by the analytical laboratory that performs the analysis.

■ 8. In appendix A to part 136:

■ a. Remove Method 608;

■ b. Add Method 608.3;

■ c. Revise Method 611 section 1.1.;

■ d. Remove Method 624;

■ e. Add Method 624.1;

■ f. Remove Method 625; and

■ g. Add Method 625.1.

The additions and revisions read as follows:

**Appendix A to Part 136—Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater**

\* \* \* \* \*

*Method 608.3—Organochlorine Pesticides And PCBs By GC/HSD*

1. Scope and Application

1.1 This method is for determination of organochlorine pesticides and polychlorinated biphenyls (PCBs) in industrial discharges and other environmental samples by gas chromatography (GC) combined with a halogen-specific detector (HSD; *e.g.*, electron capture, electrolytic conductivity), as provided under 40 CFR 136.1. This revision is based on a previous protocol (Reference 1), on the revision promulgated October 26, 1984, on an inter-laboratory method validation study (Reference 2), and on EPA Method 1656 (Reference 16). The analytes that may be qualitatively and quantitatively determined using this method and their CAS Registry numbers are listed in Table 1.

1.2 This method may be extended to determine the analytes listed in Table 2. However, extraction or gas chromatography challenges for some of these analytes may make quantitative determination difficult.

1.3 When this method is used to analyze unfamiliar samples for an analyte listed in Table 1 or Table 2, analyte identification must be supported by at least one additional

qualitative technique. This method gives analytical conditions for a second GC column that can be used to confirm and quantify measurements. Additionally, Method 625.1 provides gas chromatograph/mass spectrometer (GC/MS) conditions appropriate for the qualitative confirmation of results for the analytes listed in Tables 1 and 2 using the extract produced by this method, and Method 1699 (Reference 18) provides high resolution GC/MS conditions for qualitative confirmation of results using the original sample. When such methods are used to confirm the identifications of the target analytes, the quantitative results should be derived from the procedure with the calibration range and sensitivity that are most appropriate for the intended application.

1.4 The large number of analytes in Tables 1 and 2 makes testing difficult if all analytes are determined simultaneously. Therefore, it is necessary to determine and perform quality control (QC) tests for the "analytes of interest" only. The analytes of interest are those required to be determined by a regulatory/control authority or in a permit, or by a client. If a list of analytes is not specified, the analytes in Table 1 must be determined, at a minimum, and QC testing must be performed for these analytes. The analytes in Table 1 and some of the analytes in Table 2 have been identified as Toxic Pollutants (40 CFR 401.15), expanded to a list of Priority Pollutants (40 CFR part 423, appendix A).

1.5 In this revision to Method 608, Chlordane has been listed as the alpha- and gamma- isomers in Table 1. Reporting may be by the individual isomers, or as the sum of the concentrations of these isomers, as requested or required by a regulatory/control authority or in a permit. Technical Chlordane is listed in Table 2 and may be used in cases where historical reporting has only been the Technical Chlordane. Toxaphene and the PCBs have been moved from Table 1 to Table 2 (Additional Analytes) to distinguish these analytes from the analytes required in quality control tests (Table 1). QC acceptance criteria for Toxaphene and the PCBs have been retained in Table 4 and may continue to be applied if desired, or if these analytes are requested or required by a regulatory/control authority or in a permit. Method 1668C (Reference 17) may be useful for determination of PCBs as individual chlorinated biphenyl congeners, and Method 1699 (Reference 18) may be useful for determination of the pesticides listed in this method. However, at the time of writing of this revision, Methods 1668C and 1699 had not been approved for use at 40 CFR part 136.

1.6 Method detection limits (MDLs; Reference 3) for the analytes in Tables 1 and some of the analytes in Table 2 are listed in those tables. These MDLs were determined in reagent water (Reference 3). Advances in analytical technology, particularly the use of capillary (open-tubular) columns, allowed laboratories to routinely achieve MDLs for the analytes in this method that are 2–10 times lower than those in the version promulgated in 1984. The MDL for an analyte in a specific wastewater may differ from those listed, depending upon the nature of interferences in the sample matrix.

1.6.1 EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described in section 15.6 are focused on such monitoring needs and may not be relevant to other uses of the method.

1.6.2 This method includes "reporting limits" based on EPA's "minimum level" (ML) concept (see the glossary in section 23). Tables 1 and 2 contain MDL values and ML values for many of the analytes.

1.7 The separatory funnel and continuous liquid-liquid sample extraction and concentration steps in this method are essentially the same as those steps in Methods 606, 609, 611, and 612. Thus, a single sample may be extracted to measure the analytes included in the scope of each of these methods. Samples may also be extracted using a disk-based solid-phase extraction (SPE) procedure developed by the 3M Corporation and approved by EPA as an Alternate Test Procedure (ATP) for wastewater analyses in 1995 (Reference 20).

1.8 This method is performance-based. It may be modified to improve performance (e.g., to overcome interferences or improve the accuracy of results) provided all performance requirements are met.

1.8.1 Examples of allowed method modifications are described at 40 CFR 136.6. Other examples of allowed modifications specific to this method are described in section 8.1.2.

1.8.2 Any modification beyond those expressly permitted at 40 CFR 136.6 or in section 8.1.2 of this method shall be considered a major modification subject to application and approval of an alternate test procedure under 40 CFR 136.4 and 136.5.

1.8.3 For regulatory compliance, any modification must be demonstrated to produce results equivalent or superior to results produced by this method when applied to relevant wastewaters (section 8.1.2).

1.9 This method is restricted to use by or under the supervision of analysts experienced in the use of GC/HSD. The laboratory must demonstrate the ability to generate acceptable results with this method using the procedure in section 8.2.

1.10 Terms and units of measure used in this method are given in the glossary at the end of the method.

## 2. Summary of Method

2.1 A measured volume of sample, the amount required to meet an MDL or reporting limit (nominally 1–L), is extracted with methylene chloride using a separatory funnel, a continuous liquid/liquid extractor, or disk-based solid-phase extraction equipment. The extract is dried and concentrated for cleanup, if required. After cleanup, or if cleanup is not required, the extract is exchanged into an appropriate solvent and concentrated to the volume necessary to meet the required compliance or detection limit, and analyzed by GC/HSD.

2.2 Qualitative identification of an analyte in the extract is performed using the retention times on dissimilar GC columns. Quantitative analysis is performed using the peak areas or peak heights for the analyte on

the dissimilar columns with either the external or internal standard technique.

2.3 Florisil®, alumina, a C18 solid-phase cleanup, and an elemental sulfur cleanup procedure are provided to aid in elimination of interferences that may be encountered. Other cleanup procedures may be used if demonstrated to be effective for the analytes in a wastewater matrix.

## 3. Contamination and Interferences

3.1 Solvents, reagents, glassware, and other sample processing lab ware may yield artifacts, elevated baselines, or matrix interferences causing misinterpretation of chromatograms. All materials used in the analysis must be demonstrated free from contamination and interferences by running blanks initially and with each extraction batch (samples started through the extraction process in a given 24-hour period, to a maximum of 20 samples—see Glossary for detailed definition), as described in section 8.5. Specific selection of reagents and purification of solvents by distillation in all-glass systems may be required. Where possible, labware is cleaned by extraction or solvent rinse, or baking in a kiln or oven.

3.2 Glassware must be scrupulously cleaned (Reference 4). Clean all glassware as soon as possible after use by rinsing with the last solvent used in it. Solvent rinsing should be followed by detergent washing with hot water, and rinses with tap water and reagent water. The glassware should then be drained dry, and heated at 400 °C for 15–30 minutes. Some thermally stable materials, such as PCBs, may require higher temperatures and longer baking times for removal. Solvent rinses with pesticide quality acetone, hexane, or other solvents may be substituted for heating. Do not heat volumetric labware above 90 °C. After drying and cooling, store inverted or capped with solvent-rinsed or baked aluminum foil in a clean environment to prevent accumulation of dust or other contaminants.

3.3 Interferences by phthalate esters can pose a major problem in pesticide analysis when using the electron capture detector. The phthalate esters generally appear in the chromatogram as large late eluting peaks, especially in the 15 and 50% fractions from Florisil®. Common flexible plastics contain varying amounts of phthalates that may be extracted or leached from such materials during laboratory operations. Cross contamination of clean glassware routinely occurs when plastics are handled during extraction steps, especially when solvent-wetted surfaces are handled. Interferences from phthalates can best be minimized by avoiding use of non-fluoropolymer plastics in the laboratory. Exhaustive cleanup of reagents and glassware may be required to eliminate background phthalate contamination (References 5 and 6). Interferences from phthalate esters can be avoided by using a microcoulometric or electrolytic conductivity detector.

3.4 Matrix interferences may be caused by contaminants co-extracted from the sample. The extent of matrix interferences will vary considerably from source to source, depending upon the nature and diversity of the industrial complex or municipality being sampled. Interferences extracted from

samples high in total organic carbon (TOC) may result in elevated baselines, or by enhancing or suppressing a signal at or near the retention time of an analyte of interest. Analyses of the matrix spike and matrix spike duplicate (Section 8.3) may be useful in identifying matrix interferences, and the cleanup procedures in Section 11 may aid in eliminating these interferences. EPA has provided guidance that may aid in overcoming matrix interferences (Reference 7); however, unique samples may require additional cleanup approaches to achieve the MDLs listed in Tables 1 and 2.

#### 4. Safety

4.1 Hazards associated with each reagent used in this method have not been precisely defined; however, each chemical compound should be treated as a potential health hazard. From this viewpoint, exposure to these chemicals must be reduced to the lowest possible level by whatever means available. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of safety data sheets (SDSs, OSHA, 29 CFR 1910.12009(g)) should also be made available to all personnel involved in sample handling and chemical analysis. Additional references to laboratory safety are available and have been identified (References 8 and 9) for the information of the analyst.

4.2 The following analytes covered by this method have been tentatively classified as known or suspected human or mammalian carcinogens: 4,4'-DDT, 4,4'-DDD, the BHCs, and the PCBs. Primary standards of these toxic analytes should be prepared in a chemical fume hood, and a NIOSH/MESA approved toxic gas respirator should be worn when high concentrations are handled.

4.3 This method allows the use of hydrogen as a carrier gas in place of helium (section 5.8.2). The laboratory should take the necessary precautions in dealing with hydrogen, and should limit hydrogen flow at the source to prevent buildup of an explosive mixture of hydrogen in air.

#### 5. Apparatus and Materials

**Note:** Brand names and suppliers are for illustration purposes only. No endorsement is implied. Equivalent performance may be achieved using equipment and materials other than those specified here. Demonstrating that the equipment and supplies used in the laboratory achieve the required performance is the responsibility of the laboratory. Suppliers for equipment and materials in this method may be found through an on-line search. Please do not contact EPA for supplier information.

5.1 Sampling equipment, for discrete or composite sampling.

5.1.1 Grab sample bottle—Amber glass bottle large enough to contain the necessary sample volume (nominally 1 L), fitted with a fluoropolymer-lined screw cap. Foil may be substituted for fluoropolymer if the sample is not corrosive. If amber bottles are not available, protect samples from light. Unless pre-cleaned, the bottle and cap liner must be washed, rinsed with acetone or methylene

chloride, and dried before use to minimize contamination.

5.1.2 Automatic sampler (optional)—The sampler must use a glass or fluoropolymer container and tubing for sample collection. If the sampler uses a peristaltic pump, a minimum length of compressible silicone rubber tubing may be used. Before use, rinse the compressible tubing thoroughly with methanol, followed by repeated rinsing with reagent water to minimize the potential for sample contamination. An integrating flow meter is required to collect flow proportional composites. The sample container must be kept refrigerated at  $\leq 6$  °C and protected from light during compositing.

5.2. Lab ware.

5.2.1 Extraction.

5.2.1.1 pH measurement.

5.2.1.1.1 pH meter, with combination glass electrode.

5.2.1.1.2 pH paper, wide range (Hydriion Papers, or equivalent).

5.2.1.2 Separatory funnel—Size appropriate to hold the sample and extraction solvent volumes, equipped with fluoropolymer stopcock.

5.2.1.3 Continuous liquid-liquid extractor—Equipped with fluoropolymer or glass connecting joints and stopcocks requiring no lubrication. (Hershberg-Wolf Extractor, Ace Glass Company, Vineland, NJ, or equivalent.)

5.2.1.3.1 Round-bottom flask, 500-mL, with heating mantle.

5.2.1.3.2 Condenser, Graham, to fit extractor.

5.2.1.4 Solid-phase extractor—90-mm filter apparatus (Figure 2) or multi-position manifold.

**Note:** The approved ATP for solid-phase extraction is limited to disk-based extraction media and associated peripheral equipment.

5.2.1.4.1 Vacuum system—Capable of achieving 0.1 bar (25 inch) Hg (house vacuum, vacuum pump, or water aspirator), equipped with shutoff valve and vacuum gauge.

5.2.1.4.2 Vacuum trap—Made from 500-mL sidearm flask fitted with single-hole rubber stopper and glass tubing.

5.2.2 Filtration.

5.2.2.1 Glass powder funnel, 125- to 250-mL.

5.2.2.2 Filter paper for above, Whatman 41, or equivalent.

5.2.2.3 Prefiltering aids—90-mm 1- $\mu$ m glass fiber filter or Empore® Filter Aid 400.

5.2.3 Drying column.

5.2.3.1 Chromatographic column—Approximately 400 mm long x 15 mm ID, with fluoropolymer stopcock and coarse frit filter disc (Kontes or equivalent).

5.2.3.2 Glass wool—Pyrex, extracted with methylene chloride or baked at 450 °C for 1 hour minimum.

5.2.4 Column for Florisil® or alumina cleanup—Approximately 300 mm long x 10 mm ID, with fluoropolymer stopcock. (This column is not required if cartridges containing Florisil® are used.)

5.2.5 Concentration/evaporation.

**Note:** Use of a solvent recovery system with the K-D or other solvent evaporation apparatus is strongly recommended.

5.2.5.1 Kuderna-Danish concentrator.  
5.2.5.1.1 Concentrator tube, Kuderna-Danish—10-mL, graduated (Kontes or equivalent). Calibration must be checked at the volumes employed for extract volume measurement. A ground-glass stopper is used to prevent evaporation of extracts.

5.2.5.1.2 Evaporative flask, Kuderna-Danish—500-mL (Kontes or equivalent). Attach to concentrator tube with connectors.

5.2.5.1.3 Snyder column, Kuderna/Danish—Three-ball macro (Kontes or equivalent).

5.2.5.1.4 Snyder column—Two-ball micro (Kontes or equivalent).

5.2.5.1.5 Water bath—Heated, with concentric ring cover, capable of temperature control ( $\pm 2$  °C), installed in a hood using appropriate engineering controls to limit exposure to solvent vapors.

5.2.5.2 Nitrogen evaporation device—Equipped with heated bath that can be maintained at an appropriate temperature for the solvent and analytes. (N-Evap, Organomation Associates, Inc., or equivalent).

5.2.5.3 Rotary evaporator—Buchi/Brinkman-American Scientific or equivalent, equipped with a variable temperature water bath, vacuum source with shutoff valve at the evaporator, and vacuum gauge.

5.2.5.3.1 A recirculating water pump and chiller are recommended, as use of tap water for cooling the evaporator wastes large volumes of water and can lead to inconsistent performance as water temperatures and pressures vary.

5.2.5.3.2 Round-bottom flask—100-mL and 500-mL or larger, with ground-glass fitting compatible with the rotary evaporator

**Note:** This equipment is used to prepare copper foil or copper powder for removing sulfur from sample extracts (see Section 6.7.4).

5.2.5.4 Automated concentrator—Equipped with glassware sufficient to concentrate 3–400 mL extract to a final volume of 1–10 mL under controlled conditions of temperature and nitrogen flow (Turbovap, or equivalent). Follow manufacturer's directions and requirements.

5.2.5.5 Boiling chips—Glass, silicon carbide, or equivalent, approximately 10/40 mesh. Heat at 400 °C for 30 minutes, or solvent rinse or Soxhlet extract with methylene chloride.

5.2.6 Solid-phase extraction disks—90-mm extraction disks containing 2 g of 8- $\mu$ m octadecyl (C18) bonded silica uniformly enmeshed in a matrix of inert PTFE fibrils (3M Empore® or equivalent). The disks should not contain any organic compounds, either from the PTFE or the bonded silica, which will leach into the methylene chloride eluant. One liter of reagent water should pass through the disks in 2–5 minutes, using a vacuum of at least 25 inches of mercury.

**Note:** Extraction disks from other manufacturers may be used in this procedure, provided that they use the same solid-phase materials (*i.e.*, octadecyl bonded silica). Disks of other diameters also may be used, but may adversely affect the flow rate of the sample through the disk.

5.3 Vials.

5.3.1 Extract storage—10- to 15-mL, amber glass, with fluoropolymer-lined screw cap.

5.3.2 GC autosampler—1- to 5-mL, amber glass, with fluoropolymer-lined screw- or crimp-cap, to fit GC autosampler.

5.4 Balances.

5.4.1 Analytical—Capable of accurately weighing 0.1 mg.

5.4.2 Top loading—Capable of weighing 10 mg.

5.5 Sample cleanup.

5.5.1 Oven—For baking and storage of adsorbents, capable of maintaining a constant temperature ( $\pm 5$  °C) in the range of 105–250 °C.

5.5.2 Muffle furnace—Capable of cleaning glassware or baking sodium sulfate in the range of 400–450 °C.

5.5.3 Vacuum system and cartridges for solid-phase cleanup (see Section 11.2).

5.5.3.1 Vacuum system—Capable of achieving 0.1 bar (25 in.) Hg (house vacuum, vacuum pump, or water aspirator), equipped with shutoff valve and vacuum gauge.

5.5.3.2 VacElute Manifold (Analytichem International, or equivalent).

5.5.3.3 Vacuum trap—Made from 500-mL sidearm flask fitted with single-hole rubber stopper and glass tubing.

5.5.3.4 Rack for holding 50-mL volumetric flasks in the manifold.

5.5.3.5 Cartridge—Mega Bond Elute, Non-polar, C18 Octadecyl, 10 g/60 mL (Analytichem International or equivalent), used for solid-phase cleanup of sample extracts (see Section 11.2).

5.5.4 Sulfur removal tube—40- to 50-mL bottle, test tube, or Erlenmeyer flask with fluoropolymer-lined screw cap.

5.6 Centrifuge apparatus.

5.6.1 Centrifuge—Capable of rotating 500-mL centrifuge bottles or 15-mL centrifuge tubes at 5,000 rpm minimum.

5.6.2 Centrifuge bottle—500-mL, with screw cap, to fit centrifuge.

5.6.3 Centrifuge tube—15-mL, with screw cap, to fit centrifuge.

5.7 Miscellaneous lab ware—Graduated cylinders, pipettes, beakers, volumetric flasks, vials, syringes, and other lab ware necessary to support the operations in this method.

5.8 Gas chromatograph—Dual-column with simultaneous split/splitless, temperature programmable split/splitless (PTV), or on-column injection; temperature program with isothermal holds, and all required accessories including syringes, analytical columns, gases, and detectors. An autosampler is highly recommended because it injects volumes more reproducibly than manual injection techniques. Alternatively, two separate single-column gas chromatographic systems may be employed.

5.8.1 Example columns and operating conditions.

5.8.1.1 DB-608 (or equivalent), 30-m long x 0.53-mm ID fused-silica capillary, 0.83- $\mu$ m film thickness.

5.8.1.2 DB-1701 (or equivalent), 30-m long x 0.53-mm ID fused-silica capillary, 1.0- $\mu$ m film thickness.

5.8.1.3 Suggested operating conditions used to meet the retention times shown in Table 3 are:

(a) Carrier gas flow rate: Approximately 7 mL/min,

(b) Initial temperature: 150 °C for 0.5 minute,

(c) Temperature program: 150–270 °C at 5 °C/min, and

(d) Final temperature: 270 °C, until *trans*-Permethrin elutes.

**Note:** Other columns, internal diameters, film thicknesses, and operating conditions may be used, provided that the performance requirements in this method are met. However, the column pair chosen must have dissimilar phases/chemical properties in order to separate the compounds of interest in different retention time order. Columns that only differ in the length, ID, or film thickness, but use the same stationary phase do not qualify as “dissimilar.”

5.8.2 Carrier gas—Helium or hydrogen. Data in the tables in this method were obtained using helium carrier gas. If hydrogen is used, analytical conditions may need to be adjusted for optimum performance, and calibration and all QC tests must be performed with hydrogen carrier gas. See Section 4.3 for precautions regarding the use of hydrogen as a carrier gas.

5.8.3 Detector—Halogen-specific detector (electron capture detector [ECD], electrolytic conductivity detector [ELCD], or equivalent). The ECD has proven effective in the analysis of wastewaters for the analytes listed in Tables 1 and 2, and was used to develop the method performance data in Section 17 and Tables 4 and 5.

5.8.4 Data system—A computer system must be interfaced to the GC that allows continuous acquisition and storage of data from the detectors throughout the chromatographic program. The computer must have software that allows searching GC data for specific analytes, and for plotting responses versus time. Software must also be available that allows integrating peak areas or peak heights in selected retention time windows and calculating concentrations of the analytes.

## 6. Reagents and Standards

6.1 pH adjustment.

6.1.1 Sodium hydroxide solutions.

6.1.1.1 Concentrated (10 M)—Dissolve 40 g of NaOH (ACS) in reagent water and dilute to 100 mL.

6.1.1.2 Dilute (1 M)—Dissolve 40 g NaOH in 1 L of reagent water.

6.1.2 Sulfuric acid (1+1)—Slowly add 50 mL of H<sub>2</sub>SO<sub>4</sub> (ACS, sp. gr. 1.84) to 50 mL of reagent water.

6.1.3 Hydrochloric acid—Reagent grade, 6 N.

6.2 Sodium thiosulfate—(ACS) granular.

6.3 Sodium sulfate—Sodium sulfate, reagent grade, granular anhydrous (Baker or equivalent), rinsed with methylene chloride, baked in a shallow tray at 450 °C for 1 hour minimum, cooled in a desiccator, and stored in a pre-cleaned glass bottle with screw cap which prevents moisture from entering. If, after heating, the sodium sulfate develops a noticeable grayish cast (due to the presence of carbon in the crystal matrix), that batch of reagent is not suitable for use and should be discarded. Extraction with methylene chloride (as opposed to simple rinsing) and

baking at a lower temperature may produce sodium sulfate suitable for use.

6.4 Reagent water—Reagent water is defined as water in which the analytes of interest and interfering compounds are not observed at the MDLs of the analytes in this method.

6.5 Solvents—Methylene chloride, acetone, methanol, hexane, acetonitrile, and isooctane, high purity pesticide quality, or equivalent, demonstrated to be free of the analytes and interferences (section 3). Purification of solvents by distillation in all-glass systems may be required.

**Note:** The standards and final sample extracts must be prepared in the same final solvent.

6.6 Ethyl ether—Nanograde, redistilled in glass if necessary. Ethyl ether must be shown to be free of peroxides before use, as indicated by EM Laboratories Quant test strips (available from Scientific Products Co. and other suppliers). Procedures recommended for removal of peroxides are provided with the test strips. After removal of peroxides, add 20 mL of ethyl alcohol preservative to each liter of ether.

6.7 Materials for sample cleanup.

6.7.1 Florisil®—PR grade (60/100 mesh), activated at 650–700 °C, stored in the dark in a glass container with fluoropolymer-lined screw cap. Activate each batch immediately prior to use for 16 hours minimum at 130 °C in a foil-covered glass container and allow to cool. Alternatively, 500 mg cartridges (J.T. Baker, or equivalent) may be used.

6.7.1.1 Cartridge certification—Each cartridge lot must be certified to ensure recovery of the analytes of interest and removal of 2,4,6-trichlorophenol. To make the test mixture, add the trichlorophenol solution (section 6.7.1.3) to the same standard used to prepare the Quality Control Check Sample (section 6.8.3). Transfer the mixture to the column and dry the column. Pre-elute with three 10-mL portions of elution solvent, drying the column between elutions. Elute the cartridge with 10 mL each of methanol and water, as in section 11.2.3.3.

6.7.1.2 Concentrate the eluant to per section 10.3.3, exchange to isooctane or hexane per section 10.3.3, and inject 1.0  $\mu$ L of the concentrated eluant into the GC using the procedure in section 12. The recovery of all analytes (including the unresolved GC peaks) shall be within the ranges for calibration verification (section 13.6 and Table 4), the recovery of trichlorophenol shall be less than 5%, and no peaks interfering with the target analytes shall be detected. Otherwise the Florisil cartridge is not performing properly and the cartridge lot shall be rejected.

6.7.1.3 Florisil cartridge calibration solution—2,4,6-Trichlorophenol, 0.1  $\mu$ g/mL in acetone.

6.7.2 SPE elution solvent—Methylene chloride:acetonitrile:hexane (50:3:47).

6.7.3 Alumina, neutral, Brockman Activity I, 80–200 mesh (Fisher Scientific certified, or equivalent). Heat in a glass bottle for 16 hours at 400 to 450 °C. Seal and cool to room temperature. Add 7% (w/w) reagent water and mix for 10 to 12 hours. Keep bottle tightly sealed.

#### 6.7.4 Sulfur removal.

6.7.4.1 Copper foil or powder—Fisher, Alfa Aesar, or equivalent. Cut copper foil into approximately 1-cm squares. Copper must be activated before it may be used, as described below.

6.7.4.1.1 Place the quantity of copper needed for sulfur removal (section 11.5.1.3) in a ground-glass-stoppered Erlenmeyer flask or bottle. Cover the foil or powder with methanol.

6.7.4.1.2 Add HCl dropwise (0.5–1.0 mL) while swirling, until the copper brightens.

6.7.4.1.3 Pour off the methanol/HCl and rinse 3 times with reagent water to remove all traces of acid, then 3 times with acetone, then 3 times with hexane.

6.7.4.1.4 For copper foil, cover with hexane after the final rinse. Store in a stoppered flask under nitrogen until used. For the powder, dry on a rotary evaporator. Store in a stoppered flask under nitrogen until used. Inspect the copper foil or powder before each use. It must have a bright, non-oxidized appearance to be effective. Copper foil or powder that has oxidized may be reactivated using the procedure described above.

6.7.4.2 Tetrabutylammonium sulfite (TBA sulfite)—Prepare as described below.

6.7.4.2.1 Tetrabutylammonium hydrogen sulfate,  $[\text{CH}_3(\text{CH}_2)_3]_4\text{NH}\text{SO}_4$ .

6.7.4.2.2 Sodium sulfite,  $\text{Na}_2\text{SO}_3$ .

6.7.4.2.3 Dissolve approximately 3 g tetrabutylammonium hydrogen sulfate in 100 mL of reagent water in an amber bottle with fluoropolymer-lined screw cap. Extract with three 20-mL portions of hexane and discard the hexane extracts.

6.7.4.2.4 Add 25 g sodium sulfite to produce a saturated solution. Store at room temperature. Replace after 1 month.

6.7.5 Sodium chloride—Reagent grade, prepare at 5% (w/v) solution in reagent water.

6.8 Stock standard solutions—Stock standard solutions may be prepared from pure materials, or purchased as certified solutions. Traceability must be to the National Institute of Standards and Technology (NIST) or other national or international standard, when available. Stock solution concentrations alternative to those below may be used. Because of the toxicity of some of the compounds, primary dilutions should be prepared in a hood, and a NIOSH/MESA approved toxic gas respirator should be worn when high concentrations of neat materials are handled. The following procedure may be used to prepare standards from neat materials.

6.8.1 Accurately weigh about 0.0100 g of pure material in a 10-mL volumetric flask. Dilute to volume in pesticide quality hexane, isooctane, or other suitable solvent. Larger volumes may be used at the convenience of the laboratory. When compound purity is assayed to be 96% or greater, the weight may be used without correction to calculate the concentration of the stock standard. Commercially prepared stock standards may be used at any concentration if they are certified by the manufacturer or by an independent source.

6.8.1.1 Unless stated otherwise in this method, store non-aqueous standards in

fluoropolymer-lined screw-cap, or heat-sealed, glass containers, in the dark at  $-20$  to  $-10$  °C. Store aqueous standards; e.g., the aqueous LCS (section 8.4), in the dark at  $\leq 6$  °C, but do not freeze.

6.8.1.2 Standards prepared by the laboratory may be stored for up to one year, except when comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data on file to prove stability for a longer period. Commercially prepared standards may be stored until the expiration date provided by the vendor, except when comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data from the vendor on file to prove stability for a longer period.

6.8.2 Calibration solutions—It is necessary to prepare calibration solutions for the analytes of interest (section 1.4) only using an appropriate solvent (isooctane or hexane may be used). Whatever solvent is used, both the calibration standards and the final sample extracts must use the same solvent. Other analytes may be included as desired.

6.8.2.1 Prepare calibration standards for the single-component analytes of interest and surrogates at a minimum of three concentration levels (five are suggested) by adding appropriate volumes of one or more stock standards to volumetric flasks. One of the calibration standards should be at a concentration at or below the ML specified in Table 1, or 2, or as specified by a regulatory/control authority or in a permit. The ML value may be rounded to a whole number that is more convenient for preparing the standard, but must not exceed the ML value listed in Tables 1 or 2 for those analytes which list ML values. Alternatively, the laboratory may establish an ML for each analyte based on the concentration of the lowest calibration standard in a series of standards produced by the laboratory or obtained from a commercial vendor, again, provided that the ML does not exceed the ML in Table 1 and 2, and provided that the resulting calibration meets the acceptance criteria in section 7.5.2 based on the RSD, RSE, or  $R^2$ .

(a) The other concentrations should correspond to the expected range of concentrations found in real samples or should define the working range of the GC system. A minimum of six concentration levels is required for a second order, non-linear (e.g., quadratic;  $ax^2 + bx + c = 0$ ) calibration (section 7.5.2 or 7.6.2). Calibrations higher than second order are not allowed. A separate standard near the MDL may be analyzed as a check on sensitivity, but should not be included in the linearity assessment. The solvent for the standards must match the final solvent for the sample extracts (e.g., isooctane or hexane).

**Note:** The option for non-linear calibration may be necessary to address specific instrumental techniques. However, it is not EPA's intent to allow non-linear calibration to be used to compensate for detector saturation or to avoid proper instrument maintenance.

(b) Given the number of analytes included in this method, it is highly likely that some will coelute on one or both of the GC columns used for the analysis. Divide the analytes into two or more groups and prepare separate calibration standards for each group, at multiple concentrations (e.g., a five-point calibration will require ten solutions to cover two groups of analytes). Table 7 provides information on dividing the target analytes into separate calibration mixtures that should minimize or eliminate co-elutions. This table is provided solely as guidance, based on the GC columns suggested in this method. If an analyte listed in Table 7 is not an analyte of interest in a given laboratory setting, then it need not be included in a calibration mixture.

**Note:** Many commercially available standards are divided into separate mixtures to address this issue.

(c) If co-elutions occur in analysis of a sample, a co-elution on one column is acceptable so long as effective separation of the co-eluting compounds can be achieved on the second column.

6.8.2.2 Multi-component analytes (e.g., PCBs as Aroclors, and Toxaphene).

6.8.2.2.1 A standard containing a mixture of Aroclor 1016 and Aroclor 1260 will include many of the peaks represented in the other Aroclor mixtures. As a result, a multi-point initial calibration employing a mixture of Aroclors 1016 and 1260 at three to five concentrations should be sufficient to demonstrate the linearity of the detector response without the necessity of performing multi-point initial calibrations for each of the seven Aroclors. In addition, such a mixture can be used as a standard to demonstrate that a sample does not contain peaks that represent any one of the Aroclors. This standard can also be used to determine the concentrations of either Aroclor 1016 or Aroclor 1260, should they be present in a sample. Therefore, prepare a minimum of three calibration standards containing equal concentrations of both Aroclor 1016 and Aroclor 1260 by dilution of the stock standard with isooctane or hexane. The concentrations should correspond to the expected range of concentrations found in real samples and should bracket the linear range of the detector.

6.8.2.2.2 Single standards of each of the other five Aroclors are required to aid the analyst in pattern recognition. Assuming that the Aroclor 1016/1260 standards described in Section 6.8.2.2.1 have been used to demonstrate the linearity of the detector, these single standards of the remaining five Aroclors also may be used to determine the calibration factor for each Aroclor. Prepare a standard for each of the other Aroclors. The concentrations should generally correspond to the mid-point of the linear range of the detector, but lower concentrations may be employed at the discretion of the analyst based on project requirements.

6.8.2.2.3 For Toxaphene, prepare a minimum of three calibration standards containing Toxaphene by dilution of the stock standard with isooctane or hexane. The concentrations should correspond to the expected range of concentrations found in

real samples and should bracket the linear range of the detector.

**6.8.3 Quality Control (QC) Check Sample Concentrate**—Prepare one or more mid-level standard mixtures (concentrates) in acetone (or other water miscible solvent). The concentrate is used as the spiking solution with which to prepare the Demonstration of Capabilities (DOC) samples, the Laboratory Control Sample (LCS), and Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples described in section 8. If prepared by the laboratory (as opposed to purchasing it from a commercial supplier), the concentrate must be prepared independently from the standards used for calibration, but may be prepared from the same source as the second-source standard used for calibration verification (section 7.7). Regardless of the source, the concentrate must be in a water-miscible solvent, as noted above. The concentrate is used to prepare the DOC and LCS (sections 8.2.1 and 8.4) and MS/MSD samples (section 8.3). Depending on the analytes of interest for a given sample (see Section 1.4), multiple solutions and multiple LCS or MS/MSD samples may be required to account for co-eluting analytes. However, a co-elution on one column is acceptable so long as effective separation of the co-eluting compounds can be achieved on the second column. In addition, the concentrations of the MS/MSD samples should reflect any relevant compliance limits for the analytes of interest, as described in section 8.3.1. If a custom spiking solution is required for a specific discharge (section 8.3.1), prepare it separately from the DOC and LCS solution.

**Note:** Some commercially available standards are divided into separate mixtures to address the co-elution issue.

**6.8.4 Calibration Verification Standards**—In order to verify the results of the initial calibration standards, prepare one or more mid-level standard mixtures in isooctane or hexane, using standards obtained from a second source (different manufacturer or different certified lot from the calibration standards). These standards will be analyzed to verify the accuracy of the calibration (sections 7.7 and 13.6.2). As with the QC sample concentrate in section 6.8.3, multiple solutions may be required to address co-elutions among all of the analytes.

**6.8.5 Internal standard solution**—If the internal standard calibration technique is to be used, prepare pentachloronitrobenzene (PCNB) at a concentration of 10 µg/mL in ethyl acetate. Alternative and multiple internal standards; *e.g.*, tetrachloro-*m*-xylene, 4,4'-dibromobiphenyl, and/or decachlorobiphenyl may be used provided that the laboratory performs all QC tests and meets all QC acceptance criteria with the alternative or additional internal standard(s) as an integral part of this method.

**6.8.6 Surrogate solution**—Prepare a solution containing one or more surrogates at a concentration of 2 µg/mL in acetone. Potential surrogates include: dibutyl chlorendate (DBC), tetrachloro-*m*-xylene (TCMX), 4,4'-dibromobiphenyl, or decachlorobiphenyl. Alternative surrogates and concentrations may be used, provided the laboratory performs all QC tests and

meets all QC acceptance criteria with the alternative surrogate(s) as an integral part of this method. If the internal standard calibration technique is used, do not use the internal standard as a surrogate.

**6.8.7 DDT and endrin decomposition (breakdown) solution**—Prepare a solution containing endrin at a concentration of 50 ng/mL and 4,4'-DDT at a concentration of 100 ng/mL, in isooctane or hexane. A 1-µL injection of this standard will contain 50 picograms (pg) of endrin and 100 pg of DDT. The concentration of the solution may be adjusted by the laboratory to accommodate other injection volumes such that the same masses of the two analytes are introduced into the instrument.

## 7. Calibration

**7.1** Establish gas chromatographic operating conditions equivalent to those in Section 5.8.1 and Footnote 2 to Table 3. Alternative temperature program and flow rate conditions may be used. The system may be calibrated using the external standard technique (section 7.5) or the internal standard technique (section 7.6). It is necessary to calibrate the system for the analytes of interest (section 1.4) only.

**7.2** Separately inject the mid-level calibration standard for each calibration mixture. Store the retention time on each GC column.

**7.3** Injection of calibration solutions—Inject a constant volume in the range of 0.5 to 2.0 µL of each calibration solution into the GC column/detector pairs. An alternative volume (see Section 12.3) may be used provided all requirements in this method are met. Beginning with the lowest level mixture and proceeding to the highest level mixture may limit the risk of carryover from one standard to the next, but other sequences may be used. An instrument blank should be analyzed after the highest standard to demonstrate that there is no carry-over within the system for this calibration range.

**7.4** For each analyte, compute, record, and store, as a function of the concentration injected, the retention time and peak area on each column/detector system. If multi-component analytes are to be analyzed, store the retention time and peak area for the three to five exclusive (unique large) peaks for each PCB or technical chlordane. Use four to six peaks for toxaphene.

**7.5** External standard calibration.

**7.5.1** From the calibration data (Section 7.4), calculate the calibration factor (CF) for each analyte at each concentration according to the following equation:

$$CF = \frac{A_s}{C_s}$$

Where:

$C_s$  = Concentration of the analyte in the standard (ng/mL)

$A_s$  = Peak height or area

For multi-component analytes, choose a series of characteristic peaks for each analyte (3 to 5 for each Aroclor, 4 to 6 for toxaphene) and calculate individual calibration factors for each peak. Alternatively, for toxaphene, sum the areas of all of the peaks in the standard chromatogram and use the summed

area to determine the calibration factor. (If this alternative is used, the same approach must be used to quantitate the analyte in the samples.)

**7.5.2** Calculate the mean (average) and relative standard deviation (RSD) of the calibration factors. If the RSD is less than 20%, linearity through the origin can be assumed and the average CF can be used for calculations. Alternatively, the results can be used to fit a linear or quadratic regression of response,  $A_s$ , vs. concentration  $C_s$ . If used, the regression must be weighted inversely proportional to concentration. The coefficient of determination ( $R^2$ ) of the weighted regression must be greater than 0.920. Alternatively, the relative standard error (Reference 10) may be used as an acceptance criterion. As with the RSD, the RSE must be less than 20%. If an RSE less than 20% cannot be achieved for a quadratic regression, system performance is unacceptable and the system must be adjusted and re-calibrated.

**Note:** Regression calculations are not included in this method because the calculations are cumbersome and because many GC/ECD data systems allow selection of weighted regression for calibration and calculation of analyte concentrations.

**7.6** Internal standard calibration.

**7.6.1** From the calibration data (Section 7.4), calculate the response factor (RF) for each analyte at each concentration according to the following equation:

$$RF = \frac{(A_s \times C_{is})}{(A_{is} \times C_s)}$$

Where:

$A_s$  = Response for the analyte to be measured.

$A_{is}$  = Response for the internal standard.

$C_{is}$  = Concentration of the internal standard (ng/mL)

$C_s$  = Concentration of the analyte to be measured (ng/mL).

**7.6.2** Calculate the mean (average) and relative standard deviation (RSD) of the response factors. If the RSD is less than 15%, linearity through the origin can be assumed and the average RF can be used for calculations. Alternatively, the results can be used to prepare a calibration curve of response ratios,  $A_s/A_{is}$ , vs. concentration ratios,  $C_s/C_{is}$ , for the analyte. A minimum of six concentration levels is required for a non-linear (*e.g.*, quadratic) regression. If used, the regression must be weighted inversely proportional to concentration, and the coefficient of determination of the weighted regression must be greater than 0.920.

Alternatively, the relative standard error (Reference 10) may be used as an acceptance criterion. As with the RSD, the RSE must be less than 15%. If an RSE less than 15% cannot be achieved for a quadratic regression, system performance is unacceptable and the system must be adjusted and re-calibrated.

**7.7** The working calibration curve, CF, or RF must be verified immediately after calibration and at the beginning and end of each 24-hour shift by the analysis of a mid-level calibration standard. The calibration verification standard(s) must be obtained from a second manufacturer or a manufacturer's batch prepared

independently from the batch used for calibration (Section 6.8.4). Requirements for calibration verification are given in Section 13.6 and Table 4. Alternatively, calibration verification may be performed after a set number of injections (*e.g.*, every 20 injections), to include injection of extracts of field samples, QC samples, instrument blanks, etc. (*i.e.*, it is based on the number of injections performed, not sample extracts). The time for the injections may not exceed 24 hours.

**Note:** The 24-hour shift begins after analysis of the combined QC standard (calibration verification) and ends 24 hours later. The ending calibration verification standard is run immediately after the last sample run during the 24-hour shift, so the beginning and ending calibration verifications are outside of the 24-hour shift. If calibration verification is based on the number of injections instead of time, then the ending verification standard for one group of injections may be used as the beginning verification for the next group of injections.

7.8 Florisil® calibration—The column cleanup procedure in Section 11.3 utilizes Florisil column chromatography. Florisil® from different batches or sources may vary in adsorptive capacity. To standardize the amount of Florisil® which is used, use of the lauric acid value (Reference 11) is suggested. The referenced procedure determines the adsorption from a hexane solution of lauric acid (mg) per g of Florisil®. The amount of Florisil® to be used for each column is calculated by dividing 110 by this ratio and multiplying by 20 g. If cartridges containing Florisil® are used, then this step is not necessary.

## 8. Quality Control

8.1 Each laboratory that uses this method is required to operate a formal quality assurance program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and ongoing analysis of spiked samples and blanks to evaluate and document data quality. The laboratory must maintain records to document the quality of data generated. Ongoing data quality checks are compared with established performance criteria to determine if the results of analyses meet performance requirements of this method. A quality control check standard (LCS, section 8.4) must be prepared and analyzed with each batch of samples to confirm that the measurements were performed in an in-control mode of operation. A laboratory may develop its own performance criteria (as QC acceptance criteria), provided such criteria are as or more restrictive than the criteria in this method.

8.1.1 The laboratory must make an initial demonstration of the capability (IDC) to generate acceptable precision and recovery with this method. This demonstration is detailed in Section 8.2. On a continuing basis, the laboratory must repeat demonstration of capability (DOC) at least annually.

8.1.2 In recognition of advances that are occurring in analytical technology, and to overcome matrix interferences, the laboratory

is permitted certain options (section 1.8 and 40 CFR 136.6(b) [Reference 12]) to improve separations or lower the costs of measurements. These options may include alternative extraction (*e.g.*, other solid-phase extraction materials and formats), concentration, and cleanup procedures, and changes in GC columns (Reference 12). Alternative determinative techniques, such as the substitution of spectroscopic or immunoassay techniques, and changes that degrade method performance, are not allowed. If an analytical technique other than the techniques specified in this method is used, that technique must have a specificity equal to or greater than the specificity of the techniques in this method for the analytes of interest. The laboratory is also encouraged to participate in performance evaluation studies (see section 8.8).

8.1.2.1 Each time a modification listed above is made to this method, the laboratory is required to repeat the procedure in section 8.2. If the detection limit of the method will be affected by the change, the laboratory is required to demonstrate that the MDLs (40 CFR part 136, appendix B) are lower than one-third the regulatory compliance limit or as low as the MDLs in this method, whichever are greater. If calibration will be affected by the change, the instrument must be recalibrated per section 7. Once the modification is demonstrated to produce results equivalent or superior to results produced by this method as written, that modification may be used routinely thereafter, so long as the other requirements in this method are met (*e.g.*, matrix spike/matrix spike duplicate recovery and relative percent difference).

8.1.2.1.1 If an allowed method modification, is to be applied to a specific discharge, the laboratory must prepare and analyze matrix spike/matrix spike duplicate (MS/MSD) samples (section 8.3) and LCS samples (section 8.4). The laboratory must include surrogates (Section 8.7) in each of the samples. The MS/MSD and LCS samples must be fortified with the analytes of interest (section 1.4). If the modification is for nationwide use, MS/MSD samples must be prepared from a minimum of nine different discharges (See section 8.1.2.1.2), and all QC acceptance criteria in this method must be met. This evaluation only needs to be performed once other than for the routine QC required by this method (for example it could be performed by the vendor of an alternative material) but any laboratory using that specific material must have the results of the study available. This includes a full data package with the raw data that will allow an independent reviewer to verify each determination and calculation performed by the laboratory (see section 8.1.2.2.5, items (a)–(q)).

8.1.2.1.2 Sample matrices on which MS/MSD tests must be performed for nationwide use of an allowed modification:

- (a) Effluent from a publicly owned treatment works (POTW).
- (b) ASTM D5905 Standard Specification for Substitute Wastewater.
- (c) Sewage sludge, if sewage sludge will be in the permit.

(d) ASTM D1141 Standard Specification for Substitute Ocean Water, if ocean water will be in the permit.

(e) Untreated and treated wastewaters up to a total of nine matrix types (see <https://www.epa.gov/eg/industrial-effluent-guidelines> for a list of industrial categories with existing effluent guidelines).

(i) At least one of the above wastewater matrix types must have at least one of the following characteristics:

- (A) Total suspended solids greater than 40 mg/L.
- (B) Total dissolved solids greater than 100 mg/L.
- (C) Oil and grease greater than 20 mg/L.
- (D) NaCl greater than 120 mg/L.
- (E) CaCO<sub>3</sub> greater than 140 mg/L.

(ii) The interim acceptance criteria for MS, MSD recoveries that do not have recovery limits in Table 4 or developed in section 8.3.3, and for surrogates that do not have recovery limits developed in section 8.6, must be no wider than 60–140%, and the relative percent difference (RPD) of the concentrations in the MS and MSD that do not have RPD limits in Table 4 or developed in section 8.3.3, must be less than 30%. Alternatively, the laboratory may use the laboratory's in-house limits if they are tighter.

(f) A proficiency testing (PT) sample from a recognized provider, in addition to tests of the nine matrices (section 8.1.2.1.1).

8.1.2.2 The laboratory must maintain records of modifications made to this method. These records include the following, at a minimum:

8.1.2.2.1 The names, titles, and business street addresses, telephone numbers, and email addresses, of the analyst(s) that performed the analyses and modification, and of the quality control officer that witnessed and will verify the analyses and modifications.

8.1.2.2.2 A list of analytes, by name and CAS Registry number.

8.1.2.2.3 A narrative stating reason(s) for the modifications.

8.1.2.2.4 Results from all quality control (QC) tests comparing the modified method to this method, including:

- (a) Calibration (section 7).
- (b) Calibration verification (section 13.6).
- (c) Initial demonstration of capability (section 8.2).
- (d) Analysis of blanks (section 8.5).
- (e) Matrix spike/matrix spike duplicate analysis (section 8.3).
- (f) Laboratory control sample analysis (section 8.4).

8.1.2.2.5 Data that will allow an independent reviewer to validate each determination by tracing the instrument output (peak height, area, or other signal) to the final result. These data are to include:

- (a) Sample numbers and other identifiers.
- (b) Extraction dates.
- (c) Analysis dates and times.
- (d) Analysis sequence/run chronology.
- (e) Sample weight or volume (section 10).
- (f) Extract volume prior to each cleanup step (sections 10 and 11).
- (g) Extract volume after each cleanup step (section 11).
- (h) Final extract volume prior to injection (sections 10 and 12).

- (i) Injection volume (sections 12.3 and 13.2).
- (j) Sample or extract dilution (section 15.4).
- (k) Instrument and operating conditions.
- (l) Column (dimensions, material, etc.).
- (m) Operating conditions (temperatures, flow rates, etc.).
- (n) Detector (type, operating conditions, etc.).
- (o) Chromatograms and other recordings of raw data.
- (p) Quantitation reports, data system outputs, and other data to link the raw data to the results reported.
- (q) A written Standard Operating Procedure (SOP).

8.1.2.2.6 Each individual laboratory wishing to use a given modification must perform the start-up tests in section 8.1.2 (e.g., DOC, MDL), with the modification as an integral part of this method prior to applying the modification to specific discharges. Results of the DOC must meet the QC acceptance criteria in Table 5 for the analytes of interest (section 1.4), and the MDLs must be equal to or lower than the MDLs in Tables 1 and 2 for the analytes of interest.

8.1.3 Before analyzing samples, the laboratory must analyze a blank to demonstrate that interferences from the analytical system, lab ware, and reagents, are under control. Each time a batch of samples is extracted or reagents are changed, a blank must be extracted and analyzed as a safeguard against laboratory contamination. Requirements for the blank are given in section 8.5.

8.1.4 The laboratory must, on an ongoing basis, spike and analyze samples to monitor and evaluate method and laboratory performance on the sample matrix. The procedure for spiking and analysis is given in section 8.3.

8.1.5 The laboratory must, on an ongoing basis, demonstrate through analysis of a quality control check sample (laboratory control sample, LCS; on-going precision and recovery sample, OPR) that the measurement system is in control. This procedure is described in Section 8.4.

8.1.6 The laboratory should maintain performance records to document the quality of data that is generated. This procedure is given in section 8.7.

8.1.7 The large number of analytes tested in performance tests in this method present a substantial probability that one or more will fail acceptance criteria when all analytes are tested simultaneously, and a re-test (reanalysis) is allowed if this situation should occur. If, however, continued re-testing results in further repeated failures, the laboratory should document the failures and either avoid reporting results for the analytes that failed or report the problem and failures with the data. A QC failure does not relieve a discharger or permittee of reporting timely results.

8.2 Demonstration of capability (DOC)—To establish the ability to generate acceptable recovery and precision, the laboratory must perform the DOC in sections 8.2.1 through 8.2.6 for the analytes of interest initially and in an on-going manner at least annually. The laboratory must also establish MDLs for the analytes of interest using the MDL procedure

at 40 CFR part 136, appendix B. The laboratory's MDLs must be equal to or lower than those listed in Tables 1 or 2, or lower than one-third the regulatory compliance limit, whichever is greater. For MDLs not listed in Tables 1 or 2, the laboratory must determine the MDLs using the MDL procedure at 40 CFR part 136, appendix B under the same conditions used to determine the MDLs for the analytes listed in Tables 1 and 2. When analyzing the PCBs as Aroclors, it is only necessary to establish an MDL for one of the multi-component analytes (e.g., PCB 1254), or the mixture of Aroclors 1016 and 1260 may be used to establish MDLs for all of the Aroclors. Similarly, MDLs for other multi-component analytes (e.g., Chlordanes) may be determined using only one of the major components. All procedures used in the analysis, including cleanup procedures, must be included in the DOC.

8.2.1 For the DOC, a QC check sample concentrate containing each analyte of interest (section 1.4) is prepared in a water-miscible solvent using the solution in section 6.8.3.

**Note:** QC check sample concentrates are no longer available from EPA.

8.2.2 Using a pipet or syringe, prepare four QC check samples by adding an appropriate volume of the concentrate and of the surrogate(s) to each of four 1-L aliquots of reagent water. Swirl or stir to mix.

8.2.3 Extract and analyze the well-mixed QC check samples according to the method beginning in section 10.

8.2.4 Calculate the average percent recovery ( $\bar{X}$ ) and the standard deviation (s) of the percent recovery for each analyte using the four results.

8.2.5 For each analyte, compare s and  $\bar{X}$  with the corresponding acceptance criteria for precision and recovery in Table 4. For analytes in Table 2 that are not listed in Table 4, QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 12 and 13). If s and  $\bar{X}$  for all analytes of interest meet the acceptance criteria, system performance is acceptable and analysis of blanks and samples can begin. If any individual s exceeds the precision limit or any individual  $\bar{X}$  falls outside the range for recovery, system performance is unacceptable for that analyte.

**Note:** The large number of analytes in Tables 1 and 2 present a substantial probability that one or more will fail at least one of the acceptance criteria when many or all analytes are determined simultaneously.

8.2.6 When one or more of the analytes tested fail at least one of the acceptance criteria, repeat the test for only the analytes that failed. If results for these analytes pass, system performance is acceptable and analysis of samples and blanks may proceed. If one or more of the analytes again fail, system performance is unacceptable for the analytes that failed the acceptance criteria. Correct the problem and repeat the test (section 8.2). See section 8.1.7 for disposition of repeated failures.

**Note:** To maintain the validity of the test and re-test, system maintenance and/or

adjustment is not permitted between this pair of tests.

8.3 Matrix spike and matrix spike duplicate (MS/MSD)—The purpose of the MS/MSD requirement is to provide data that demonstrate the effectiveness of the method as applied to the samples in question by a given laboratory, and both the data user (discharger, permittee, regulated entity, regulatory/control authority, customer, other) and the laboratory share responsibility for provision of such data. The data user should identify the sample and the analytes of interest (section 1.4) to be spiked and provide sufficient sample volume to perform MS/MSD analyses. The laboratory must, on an ongoing basis, spike at least 5% of the samples in duplicate from each discharge being monitored to assess accuracy (recovery and precision). If direction cannot be obtained from the data user, the laboratory must spike at least one sample in duplicate per extraction batch of up to 20 samples with the analytes in Table 1. Spiked sample results should be reported only to the data user whose sample was spiked, or as requested or required by a regulatory/control authority, or in a permit.

8.3.1. If, as in compliance monitoring, the concentration of a specific analyte will be checked against a regulatory concentration limit, the concentration of the spike should be at that limit; otherwise, the concentration of the spike should be one to five times higher than the background concentration determined in section 8.3.2, at or near the midpoint of the calibration range, or at the concentration in the LCS (section 8.4) whichever concentration would be larger. When no information is available, the midpoint of the calibration may be used.

8.3.2 Analyze one sample aliquot to determine the background concentration (B) of the each analyte of interest. If necessary to meet the requirement in section 8.3.1, prepare a new check sample concentrate (section 8.2.1) appropriate for the background concentration. Spike and analyze two additional sample aliquots of the same volume as the original sample, and determine the concentrations after spiking ( $A_1$  and  $A_2$ ) of each analyte. Calculate the percent recoveries ( $P_1$  and  $P_2$ ) as:

$$P_x = \frac{A_x - B}{T} \times 100$$

where T is the known true value of the spike.

Also calculate the relative percent difference (RPD) between the concentrations ( $A_1$  and  $A_2$ ):

$$RPD = \frac{|A_1 - A_2|}{\frac{A_1 + A_2}{2}} \times 100$$

8.3.3 Compare the percent recoveries ( $P_1$  and  $P_2$ ) and the RPD for each analyte in the MS/MSD aliquots with the corresponding QC acceptance criteria for recovery (P) and RPD in Table 4.

(a) If any individual P falls outside the designated range for recovery in either aliquot, or the RPD limit is exceeded, the result for the analyte in the unspiked sample is suspect and may not be reported or used

for permitting or regulatory compliance. See section 8.1.7 for disposition of failures.

(b) For analytes in Table 2 not listed in Table 4, QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 12 and 13).

8.3.4 After analysis of a minimum of 20 MS/MSD samples for each target analyte and surrogate, and if the laboratory chooses to develop and apply optional in-house QC limits, the laboratory should calculate and apply the optional in-house QC limits for recovery and RPD of future MS/MSD samples (Section 8.3). The optional in-house QC limits for recovery are calculated as the mean observed recovery  $\pm 3$  standard deviations, and the upper QC limit for RPD is calculated as the mean RPD plus 3 standard deviations of the RPDs. The in-house QC limits must be updated at least every two years and re-established after any major change in the analytical instrumentation or process. At least 80% of the analytes tested in the MS/MSD must have in-house QC acceptance criteria that are tighter than those in Table 4 and the remaining analytes (those not included in the 80%) must meet the acceptance criteria in Table 4. If an in-house QC limit for the RPD is greater than the limit in Table 4, then the limit in Table 4 must be used. Similarly, if an in-house lower limit for recovery is below the lower limit in Table 4, then the lower limit in Table 4 must be used, and if an in-house upper limit for recovery is above the upper limit in Table 4, then the upper limit in Table 4 must be used. The laboratory must evaluate surrogate recovery data in each sample against its in-house surrogate recovery limits. The laboratory may use 60–140% as interim acceptance criteria for surrogate recoveries until in-house limits are developed. Alternatively, surrogate recovery limits may be developed from laboratory control charts. In-house QC acceptance criteria must be updated at least every two years.

8.4 Laboratory control sample (LCS)—A QC check sample (laboratory control sample, LCS; on-going precision and recovery sample, OPR) containing each single-component analyte of interest (section 1.4) must be extracted, concentrated, and analyzed with each extraction batch of up to 20 samples (section 3.1) to demonstrate acceptable recovery of the analytes of interest from a clean sample matrix. If multi-peak analytes are required, extract and prepare at least one as an LCS for each batch. Alternatively, the laboratory may set up a program where multi-peak LCS is rotated with a single-peak LCS.

8.4.1 Prepare the LCS by adding QC check sample concentrate (sections 6.8.3 and 8.2.1) to reagent water. Include all analytes of interest (section 1.4) in the LCS. The volume of reagent water must be the same as the nominal volume used for the sample, the DOC (Section 8.2), the blank (section 8.5), and the MS/MSD (section 8.3). Also add a volume of the surrogate solution (section 6.8.6).

8.4.2 Analyze the LCS prior to analysis of samples in the extraction batch (Section 3.1). Determine the concentration (A) of each analyte. Calculate the percent recovery as:

$$P_s = \frac{A}{T} \times 100$$

where T is the true value of the concentration in the LCS.

8.4.3 For each analyte, compare the percent recovery (P) with its corresponding QC acceptance criterion in Table 4. For analytes of interest in Table 2 not listed in Table 4, use the QC acceptance criteria developed for the MS/MSD (section 8.3.3.2), or limits based on laboratory control charts. If the recoveries for all analytes of interest fall within the designated ranges, analysis of blanks and field samples may proceed. If any individual recovery falls outside the range, proceed according to section 8.4.4.

**Note:** The large number of analytes in Tables 1 and 2 present a substantial probability that one or more will fail the acceptance criteria when all analytes are tested simultaneously. Because a re-test is allowed in event of failure (sections 8.1.7 and 8.4.4), it may be prudent to extract and analyze two LCSs together and evaluate results of the second analysis against the QC acceptance criteria only if an analyte fails the first test.

8.4.4 Repeat the test only for those analytes that failed to meet the acceptance criteria (P). If these analytes now pass, system performance is acceptable and analysis of blanks and samples may proceed. Repeated failure, however, will confirm a general problem with the measurement system. If this occurs, repeat the test using a fresh LCS (section 8.2.1) or an LCS prepared with a fresh QC check sample concentrate (section 8.2.1), or perform and document system repair. Subsequent to analysis of the LCS prepared with a fresh sample concentrate, or to system repair, repeat the LCS test (Section 8.4). If failure of the LCS indicates a systemic problem with samples in the batch, re-extract and re-analyze the samples in the batch. See Section 8.1.7 for disposition of repeated failures.

8.4.5 After analysis of 20 LCS samples, and if the laboratory chooses to develop and apply optional in-house QC limits, the laboratory should calculate and apply the optional in-house QC limits for recovery of future LCS samples (section 8.4). Limits for recovery in the LCS should be calculated as the mean recovery  $\pm 3$  standard deviations. A minimum of 80% of the analytes tested for in the LCS must have QC acceptance criteria tighter than those in Table 4, and the remaining analytes (those not included in the 80%) must meet the acceptance criteria in Table 4. If an in-house lower limit for recovery is lower than the lower limit in Table 4, the lower limit in Table 4 must be used, and if an in-house upper limit for recovery is higher than the upper limit in Table 4, the upper limit in Table 4 must be used. Many of the analytes and surrogates do not contain acceptance criteria. The laboratory should use 60–140% as interim acceptance criteria for recoveries of spiked analytes and surrogates that do not have recovery limits specified in Table 4, and at least 80% of the surrogates must meet the 60–140% interim criteria until in-house LCS and surrogate limits are developed. Alternatively, acceptance criteria for analytes

that do not have recovery limits in Table 4 may be based on laboratory control charts. In-house QC acceptance criteria must be updated at least every two years.

8.5 Blank—Extract and analyze a blank with each extraction batch (section 3.1) to demonstrate that the reagents and equipment used for preparation and analysis are free from contamination.

8.5.1 Prepare the blank from reagent water and spike it with the surrogates. The volume of reagent water must be the same as the volume used for samples, the DOC (section 8.2), the LCS (section 8.4), and the MS/MSD (section 8.3). Extract, concentrate, and analyze the blank using the same procedures and reagents used for the samples, LCS, and MS/MSD in the batch. Analyze the blank immediately after analysis of the LCS (section 8.4) and prior to analysis of the MS/MSD and samples to demonstrate freedom from contamination.

8.5.2 If any analyte of interest is found in the blank at a concentration greater than the MDL for the analyte, at a concentration greater than one-third the regulatory compliance limit, or at a concentration greater than one-tenth the concentration in a sample in the batch (section 3.1), whichever is greatest, analysis of samples must be halted and samples in the batch must be re-extracted and the extracts reanalyzed. Samples in a batch must be associated with an uncontaminated blank before the results for those samples may be reported or used for permitting or regulatory compliance purposes. If re-testing of blanks results in repeated failures, the laboratory should document the failures and report the problem and failures with the data.

8.6 Surrogate recovery—The laboratory must spike all samples with the surrogate standard spiking solution (section 6.8.6) per section 10.2.2 or 10.4.2, analyze the samples, and calculate the percent recovery of each surrogate. QC acceptance criteria for surrogates must be developed by the laboratory (section 8.4). If any recovery fails its criterion, attempt to find and correct the cause of the failure, and if sufficient volume is available, re-extract another aliquot of the affected sample; otherwise, see section 8.1.7 for disposition of repeated failures.

8.7 As part of the QC program for the laboratory, it is suggested but not required that method accuracy for wastewater samples be assessed and records maintained. After analysis of five or more spiked wastewater samples as in Section 8.3, calculate the average percent recovery ( $\bar{X}$ ) and the standard deviation of the percent recovery (sp). Express the accuracy assessment as a percent interval from  $\bar{X} - 2sp$  to  $\bar{X} + 2sp$ . For example, if  $\bar{X} = 90\%$  and  $sp = 10\%$ , the accuracy interval is expressed as 70–110%. Update the accuracy assessment for each analyte on a regular basis to ensure process control (e.g., after each 5–10 new accuracy measurements). If desired, statements of accuracy for laboratory performance, independent of performance on samples, may be developed using LCSs.

8.8 It is recommended that the laboratory adopt additional quality assurance practices for use with this method. The specific practices that are most productive depend

upon the needs of the laboratory and the nature of the samples. Field duplicates may be analyzed to assess the precision of environmental measurements. When doubt exists over the identification of a peak on the chromatogram, confirmatory techniques such as gas chromatography with another dissimilar column, specific element detector, or mass spectrometer must be used. Whenever possible, the laboratory should analyze standard reference materials and participate in relevant performance evaluation studies.

#### 9. Sample Collection, Preservation, and Handling

9.1 Collect samples as grab samples in glass bottles, or in refrigerated bottles using automatic sampling equipment. Collect 1-L of ambient waters, effluents, and other aqueous samples. If high concentrations of the analytes of interest are expected (e.g., for untreated effluents or in-process waters), collect a smaller volume (e.g., 250 mL), but not less than 100 mL, in addition to the 1-L sample. Follow conventional sampling practices, except do not pre-rinse the bottle with sample before collection. Automatic sampling equipment must be as free as possible of polyvinyl chloride or other tubing or other potential sources of contamination. If needed, collect additional sample(s) for the MS/MSD (section 8.3).

9.2 Ice or refrigerate the sample at  $\leq 6$  °C from the time of collection until extraction, but do not freeze. If aldrin is to be determined and residual chlorine is present, add 80 mg/L of sodium thiosulfate but do not add excess. Any method suitable for field use may be employed to test for residual chlorine (Reference 14). If sodium thiosulfate interferes in the determination of the analytes, an alternative preservative (e.g., ascorbic acid or sodium sulfite) may be used.

9.3 Extract all samples within seven days of collection and completely analyze within 40 days of extraction (Reference 1). If the sample will not be extracted within 72 hours of collection, adjust the sample pH to a range of 5.0–9.0 with sodium hydroxide solution or sulfuric acid. Record the volume of acid or base used.

#### 10. Sample Extraction

10.1 This section contains procedures for separatory funnel liquid-liquid extraction (SFLLE, section 10.2), continuous liquid-liquid extraction (CLLE, section 10.4), and disk-based solid-phase extraction (SPE, section 10.5). SFLLE is faster, but may not be as effective as CLLE for extracting polar analytes. SFLLE is labor intensive and may result in formation of emulsions that are difficult to break. CLLE is less labor intensive, avoids emulsion formation, but requires more time (18–24 hours), more hood space, and may require more solvent. SPE can be faster, unless the particulate load in an aqueous sample is so high that it slows the filtration process. If an alternative extraction scheme to those detailed in this method is used, all QC tests must be performed and all QC acceptance criteria must be met with that extraction scheme as an integral part of this method.

10.2 Separatory funnel liquid-liquid extraction (SFLLE).

10.2.1 The SFLLE procedure below assumes a sample volume of 1 L. When a different sample volume is extracted, adjust the volume of methylene chloride accordingly.

10.2.2 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. Pour the entire sample into the separatory funnel. Pipet the surrogate standard spiking solution (section 6.8.6) into the separatory funnel. If the sample will be used for the LCS or MS or MSD, pipet the appropriate QC check sample concentrate (section 8.3 or 8.4) into the separatory funnel. Mix well. If the sample arrives in a larger sample bottle, 1 L may be measured in a graduated cylinder, then added to the separatory funnel.

**Note:** Instances in which the sample is collected in an oversized bottle should be reported by the laboratory to the data user. Of particular concern is that fact that this practice precludes rinsing the empty bottle with solvent as described below, which could leave hydrophobic pesticides on the wall of the bottle, and underestimate the actual sample concentrations.

10.2.3 Add 60 mL of methylene chloride to the sample bottle, seal, and shake for 30 seconds to rinse the inner surface. Transfer the solvent to the separatory funnel and extract the sample by shaking the funnel for two minutes with periodic venting to release excess pressure. Allow the organic layer to separate from the water phase for a minimum of 10 minutes. If an emulsion forms and the emulsion interface between the layers is more than one-third the volume of the solvent layer, employ mechanical techniques to complete the phase separation. The optimum technique depends upon the sample, but may include stirring, filtration of the emulsion through glass wool, use of phase-separation paper, centrifugation, salting, freezing, or other physical methods. Collect the methylene chloride extract in a flask. If the emulsion cannot be broken (recovery of less than 80% of the methylene chloride, corrected for the water solubility of methylene chloride), transfer the sample, solvent, and emulsion into the extraction chamber of a continuous extractor and proceed as described in section 10.4.

10.2.4 Add a second 60-mL volume of methylene chloride to the sample bottle and repeat the extraction procedure a second time, combining the extracts in the flask. Perform a third extraction in the same manner. Proceed to macro-concentration (section 10.3.1).

10.2.5 Determine the original sample volume by refilling the sample bottle to the mark and transferring the liquid to an appropriately sized graduated cylinder. Record the sample volume to the nearest 5 mL. Sample volumes may also be determined by weighing the container before and after extraction or filling to the mark with water.

#### 10.3 Concentration.

##### 10.3.1 Macro concentration.

10.3.1.1 Assemble a Kuderna-Danish (K–D) concentrator by attaching a 10-mL concentrator tube to a 500-mL evaporative flask. Other concentration devices or techniques may be used in place of the K–D concentrator so long as the requirements of section 8.2 are met.

10.3.1.2 Pour the extract through a solvent-rinsed drying column containing about 10 cm of anhydrous sodium sulfate, and collect the extract in the K–D concentrator. Rinse the flask and column with 20–30 mL of methylene chloride to complete the quantitative transfer.

10.3.1.3 If no cleanup is to be performed on the sample, add 500  $\mu$ L (0.5 mL) of iso-octane to the extract to act as a keeper during concentration.

10.3.1.4 Add one or two clean boiling chips and attach a three-ball Snyder column to the K–D evaporative flask. Pre-wet the Snyder column by adding about 1 mL of methylene chloride to the top. Place the K–D apparatus on a hot water bath (60–65 °C) so that the concentrator tube is partially immersed in the hot water, and the entire lower rounded surface of the flask is bathed with hot vapor. Adjust the vertical position of the apparatus and the water temperature as required to complete the concentration in 15–20 minutes. At the proper rate of evaporation the balls of the column will actively chatter but the chambers will not flood with condensed solvent. When the apparent volume of liquid reaches 1 mL or other determined amount, remove the K–D apparatus from the water bath and allow it to drain and cool for at least 10 minutes.

10.3.1.5 If the extract is to be cleaned up by sulfur removal or acid back extraction, remove the Snyder column and rinse the flask and its lower joint into the concentrator tube with 1 to 2 mL of methylene chloride. A 5-mL syringe is recommended for this operation. Adjust the final volume to 10 mL in methylene chloride and proceed to sulfur removal (section 11.5) or acid back extraction (section 11.6). If the extract is to be cleaned up using one of the other cleanup procedures or is to be injected into the GC, proceed to Kuderna-Danish micro-concentration (section 10.3.2) or nitrogen evaporation and solvent exchange (section 10.3.3).

10.3.2 Kuderna-Danish micro concentration—Add another one or two clean boiling chips to the concentrator tube and attach a two-ball micro-Snyder column. Pre-wet the Snyder column by adding about 0.5 mL of methylene chloride to the top. Place the K–D apparatus on a hot water bath (60–65 °C) so that the concentrator tube is partially immersed in hot water. Adjust the vertical position of the apparatus and the water temperature as required to complete the concentration in 5–10 minutes. At the proper rate of distillation the balls of the column will actively chatter but the chambers will not flood with condensed solvent. When the apparent volume of liquid reaches approximately 1 mL or other required amount, remove the K–D apparatus from the water bath and allow it to drain and cool for at least 10 minutes. Remove the Snyder column and rinse the flask and its lower joint into the concentrator tube with approximately 0.2 mL of methylene chloride, and proceed to section 10.3.3 for nitrogen evaporation and solvent exchange.

10.3.3 Nitrogen evaporation and solvent exchange—Extracts to be subjected to solid-phase cleanup (SPE) are exchanged into 1.0 mL of the SPE elution solvent (section 6.7.2.2). Extracts to be subjected to Florisil®

or alumina cleanups are exchanged into hexane. Extracts that have been cleaned up and are ready for analysis are exchanged into isooctane or hexane, to match the solvent used for the calibration standards.

10.3.3.1 Transfer the vial containing the sample extract to the nitrogen evaporation (blowdown) device (section 5.2.5.2). Lower the vial into a 50–55 °C water bath and begin concentrating. During the solvent evaporation process, do not allow the extract to become dry. Adjust the flow of nitrogen so that the surface of the solvent is just visibly disturbed. A large vortex in the solvent may cause analyte loss.

10.3.3.2 Solvent exchange.

10.3.3.2.1 When the volume of the liquid is approximately 500 µL, add 2 to 3 mL of the desired solvent (SPE elution solvent for SPE cleanup, hexane for Florisil or alumina, or isooctane for final injection into the GC) and continue concentrating to approximately 500 µL. Repeat the addition of solvent and concentrate once more.

10.3.3.3.2 Adjust the volume of an extract to be cleaned up by SPE, Florisil®, or alumina to 1.0 mL. Proceed to extract cleanup (section 11).

10.3.3.3 Extracts that have been cleaned up and are ready for analysis—Adjust the final extract volume to be consistent with the volume extracted and the sensitivity desired. The goal is for a full-volume sample (e.g., 1-L) to have a final extract volume of 10 mL, but other volumes may be used.

10.3.4 Transfer the concentrated extract to a vial with fluoropolymer-lined cap. Seal the vial and label with the sample number. Store in the dark at room temperature until ready for GC analysis. If GC analysis will not be performed on the same day, store the vial in the dark at ≤6 °C. Analyze the extract by GC per the procedure in section 12.

10.4 Continuous liquid/liquid extraction (CLLE).

10.4.1 Use CLLE when experience with a sample from a given source indicates an emulsion problem, or when an emulsion is encountered using SFLE. CLLE may be used for all samples, if desired.

10.4.2 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. Transfer the sample to the continuous extractor and, using a pipet, add surrogate standard spiking solution. If the sample will be used for the LCS, MS, or MSD, pipet the appropriate check sample concentrate (section 8.2.1 or 8.3.2) into the separatory funnel. Mix well. Add 60 mL of methylene chloride to the sample bottle, seal, and shake for 30 seconds to rinse the inner surface. Transfer the solvent to the extractor.

10.4.3 Repeat the sample bottle rinse with two additional 50–100 mL portions of methylene chloride and add the rinses to the extractor.

10.4.4 Add a suitable volume of methylene chloride to the distilling flask (generally 200–500 mL) and sufficient reagent water to ensure proper operation of the extractor, and extract the sample for 18–24 hours. A shorter or longer extraction time may be used if all QC acceptance criteria are met. Test and, if necessary, adjust the pH of the water to a range of 5.0–9.0 during the

second or third hour of the extraction. After extraction, allow the apparatus to cool, then detach the distilling flask. Dry, concentrate, solvent exchange, and transfer the extract to a vial with fluoropolymer-lined cap, per Section 10.3.

10.4.5 Determine the original sample volume by refilling the sample bottle to the mark and transferring the liquid to an appropriately sized graduated cylinder. Record the sample volume to the nearest 5 mL. Sample volumes may also be determined by weighing the container before and after extraction or filling to the mark with water.

10.5 Solid-phase extraction of aqueous samples. The steps in this section address the extraction of aqueous field samples using disk-based solid-phase extraction (SPE) media, based on an ATP approved by EPA in 1995 (Reference 20). This application of SPE is distinct from that used in this method for the cleanup of sample extracts in section 11.2. Analysts must be careful not to confuse the equipment, supplies, or the procedural steps from these two different uses of SPE.

**Note:** Changes to the extraction conditions described below may be made by the laboratory under the allowance for method flexibility described in section 8.1, provided that the performance requirements in section 8.2 are met. However, changes in SPE materials, formats, and solvents must meet the requirements in section 8.1.2 and its subsections.

10.5.1 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. If the sample contains particulates, let stand to settle out the particulates before extraction.

10.5.2 Extract the sample as follows:

10.5.2.1 Place a 90-mm standard filter apparatus on a vacuum filtration flask or manifold and attach to a vacuum source. The vacuum gauge must read at least 25 in. of mercury when all valves are closed. Position a 90-mm C18 extraction disk onto the filter screen. Wet the entire disk with methanol. To aid in filtering samples with particulates, a 1-µm glass fiber filter or Empore® Filter Aid 400 can be placed on the top of the disk and wetted with methanol. Install the reservoir and clamp. Resume vacuum to dry the disk. Interrupt the vacuum. Wash the disk and reservoir with 20 mL of methylene chloride. Resume the vacuum briefly to pull methylene chloride through the disk. Interrupt the vacuum and allow the disk to soak for about a minute. Resume vacuum and completely dry the disk.

10.5.2.2 Condition the disk with 20 mL of methanol. Apply vacuum until nearly all the solvent has passed through the disk, interrupting it while solvent remains on the disk. Allow the disk to soak for about a minute. Resume vacuum to pull most of the methanol through, but interrupting it to leave a layer of methanol on the surface of the disk. Do not allow disk to dry. For uniform flow and good recovery, it is critical the disk not be allowed to dry from now until the end of the extraction. Discard waste solvent. Rinse the disk with 20 mL of deionized water. Resume vacuum to pull most of the water through, but interrupt it to leave a layer of water on the surface of the disk. Do not allow the disk to dry. If disk does dry, recondition with methanol as above.

10.5.2.3 Add the water sample to the reservoir and immediately apply the vacuum. If particulates have settled in the sample, gently decant the clear layer into the apparatus until most of the sample has been processed. Then pour the remainder including the particulates into the reservoir. Empty the sample bottle completely. When the filtration is complete, dry the disk for three minutes. Turn off the vacuum.

10.5.3 Discard sample filtrate. Insert tube to collect the eluant. The tube should fit around the drip tip of the base. Reassemble the apparatus. Add 5.0 mL of acetone to the center of the disk, allowing it to spread evenly over the disk. Turn the vacuum on and quickly off when the filter surface nears dryness but still remains wet. Allow to soak for 15 seconds. Add 20 mL of methylene chloride to the sample bottle, seal and shake to rinse the inside of the bottle. Transfer the methylene chloride from the bottle to the filter. Resume the vacuum slowly so as to avoid splashing.

Interrupt the vacuum when the filter surface nears dryness but still remains wet. Allow disk to soak in solvent for 20 seconds. Rinse the reservoir glass and disk with 10 mL of methylene chloride. Resume vacuum slowly. Interrupt vacuum when disk is covered with solvent. Allow to soak for 20 seconds. Resume vacuum to dry the disk. Remove the sample tube.

10.5.4 Dry, concentrate, solvent exchange, and transfer the extract to a vial with fluoropolymer-lined cap, per section 10.3.

10.5.5 Determine the original sample volume by refilling the sample bottle to the mark and transferring the liquid to an appropriately sized graduated cylinder. Record the sample volume to the nearest 5 mL. Sample volumes may also be determined by weighing the container before and after extraction or filling to the mark with water.

## 11. Extract Cleanup

11.1 Cleanup may not be necessary for relatively clean samples (e.g., treated effluents, groundwater, drinking water). If particular circumstances require the use of a cleanup procedure, the laboratory may use any or all of the procedures below or any other appropriate procedure (e.g., gel permeation chromatography). However, the laboratory must first repeat the tests in sections 8.2, 8.3, and 8.4 to demonstrate that the requirements of those sections can be met using the cleanup procedure(s) as an integral part of this method. This is particularly important when the target analytes for the analysis include any of the single component pesticides in Table 2, because some cleanups have not been optimized for all of those analytes.

11.1.1 The solid-phase cartridge (section 11.2) removes polar organic compounds such as phenols.

11.1.2 The Florisil® column (section 11.3) allows for selected fractionation of the organochlorine analytes and will also eliminate polar interferences.

11.1.3 Alumina column cleanup (section 11.4) also removes polar materials.

11.1.4 Elemental sulfur, which interferes with the electron capture gas chromatography of some of the pesticides,

may be removed using activated copper, or TBA sulfite. Sulfur removal (section 11.5) is required when sulfur is known or suspected to be present. Some chlorinated pesticides which also contain sulfur may be removed by this cleanup.

11.1.5 Acid back extraction (section 11.6) may be useful for cleanup of PCBs and other compounds not adversely affected by sulfuric acid.

11.2 Solid-phase extraction (SPE) as a cleanup. In order to use the C18 SPE cartridge in section 5.5.3.5 as a cleanup procedure, the sample extract must be exchanged from methylene chloride to methylene chloride:acetonitrile:hexane (50:3:47). Follow the solvent exchange steps in section 10.3.3.2 prior to attempting solid-phase cleanup.

**Note:** This application of SPE is distinct from that used in this method for the extraction of aqueous samples in section 10.5. Analysts must be careful not to confuse the equipment, supplies, or procedural steps from these two different uses of SPE.

#### 11.2.1 Setup.

11.2.1.1 Attach the VacElute Manifold (section 5.5.3.2) to a water aspirator or vacuum pump with the trap and gauge installed between the manifold and vacuum source.

11.2.1.2 Place the SPE cartridges in the manifold, turn on the vacuum source, and adjust the vacuum to 5 to 10 psi.

11.2.2 Cartridge washing—Pre-elute each cartridge prior to use sequentially with 10-mL portions each of hexane, methanol, and water using vacuum for 30 seconds after each eluting solvent. Follow this pre-elution with 1 mL methylene chloride and three 10-mL portions of the elution solvent (section 6.7.2.2) using vacuum for 5 minutes after each eluting solvent. Tap the cartridge lightly while under vacuum to dry between solvent rinses. The three portions of elution solvent may be collected and used as a cartridge blank, if desired. Finally, elute the cartridge with 10 mL each of methanol and water, using the vacuum for 30 seconds after each eluant.

#### 11.2.3 Extract cleanup.

11.2.3.1 After cartridge washing (section 11.2.2), release the vacuum and place the rack containing the 50-mL volumetric flasks (section 5.5.3.4) in the vacuum manifold. Re-establish the vacuum at 5 to 10 psi.

11.2.3.2 Using a pipette or a 1-mL syringe, transfer 1.0 mL of extract to the SPE cartridge. Apply vacuum for five minutes to dry the cartridge. Tap gently to aid in drying.

11.2.3.3 Elute each cartridge into its volumetric flask sequentially with three 10-mL portions of the methylene chloride:acetonitrile:hexane (50:3:47) elution solvent (section 6.7.2.2), using vacuum for five minutes after each portion. Collect the eluants in the 50-mL volumetric flasks.

11.2.3.4 Release the vacuum and remove the 50-mL volumetric flasks.

11.2.3.5 Concentrate the eluted extracts per Section 10.3.

11.3 Florisil®. In order to use Florisil cleanup, the sample extract must be exchanged from methylene chloride to hexane. Follow the solvent exchange steps in section 10.3.3.2 prior to attempting Florisil® cleanup.

**Note:** Alternative formats for this cleanup may be used by the laboratory, including cartridges containing Florisil®. If an alternative format is used, consult the manufacturer's instructions and develop a formal documented procedure to replace the steps in section 11.3 of this method and demonstrate that the alternative meets the relevant quality control requirements of this method.

11.3.1 If the chromatographic column does not contain a frit at the bottom, place a small plug of pre-cleaned glass wool in the column (section 5.2.4) to retain the Florisil®. Place the mass of Florisil® (nominally 20 g) predetermined by calibration (section 7.8 and Table 6) in a chromatographic column. Tap the column to settle the Florisil® and add 1 to 2 cm of granular anhydrous sodium sulfate to the top.

11.3.2 Add 60 mL of hexane to wet and rinse the sodium sulfate and Florisil®. Just prior to exposure of the sodium sulfate layer to the air, stop the elution of the hexane by closing the stopcock on the chromatographic column. Discard the eluant.

11.3.3 Transfer the concentrated extract (section 10.3.3) onto the column. Complete the transfer with two 1-mL hexane rinses, drawing the extract and rinses down to the level of the sodium sulfate.

11.3.4 Place a clean 500-mL K–D flask and concentrator tube under the column. Elute Fraction 1 with 200 mL of 6% (v/v) ethyl ether in hexane at a rate of approximately 5 mL/min. Remove the K–D flask and set it aside for later concentration. Elute Fraction 2 with 200 mL of 15% (v/v) ethyl ether in hexane into a second K–D flask. Elute Fraction 3 with 200 mL of 50% (v/v) ethyl ether in hexane into a third K–D flask. The elution patterns for the pesticides and PCBs are shown in Table 6.

11.3.5 Concentrate the fractions as in Section 10.3, except use hexane to prewet the column and set the water bath at about 85 °C. When the apparatus is cool, remove the Snyder column and rinse the flask and its lower joint into the concentrator tube with hexane. Adjust the volume of Fraction 1 to approximately 10 mL for sulfur removal (Section 11.5), if required; otherwise, adjust the volume of the fractions to 10 mL, 1.0 mL, or other volume needed for the sensitivity desired. Analyze the concentrated extract by gas chromatography (Section 12).

11.4 Alumina. The sample extract must be exchanged from methylene chloride to hexane. Follow the solvent exchange steps in section 10.3.3.2 prior to attempting alumina cleanup.

11.4.1 If the chromatographic column does not contain a frit at the bottom, place a small plug of pre-cleaned glass wool in the chromatographic column (section 5.2.4) to retain the alumina. Add 10 g of alumina (section 6.7.3) on top of the plug. Tap the column to settle the alumina. Place 1–2 g of anhydrous sodium sulfate on top of the alumina.

11.4.2 Close the stopcock and fill the column to just above the sodium sulfate with hexane. Add 25 mL of hexane. Open the stopcock and adjust the flow rate of hexane to approximately 2 mL/min. Do not allow the column to go dry throughout the elutions.

11.4.3 When the level of the hexane is at the top of the column, quantitatively transfer the extract to the column. When the level of the extract is at the top of the column, slowly add 25 mL of hexane and elute the column to the level of the sodium sulfate. Discard the hexane.

11.4.4 Place a K–D flask (section 5.2.5.1.2) under the column and elute the pesticides with approximately 150 mL of hexane:ethyl ether (80:20 v/v). It may be necessary to adjust the volume of elution solvent for slightly different alumina activities.

11.4.5 Concentrate the extract per section 10.3.

11.5 Sulfur removal—Elemental sulfur will usually elute in Fraction 1 of the Florisil® column cleanup. If Florisil® cleanup is not used, or to remove sulfur from any of the Florisil® fractions, use one of the sulfur removal procedures below. These procedures may be applied to extracts in hexane, ethyl ether, or methylene chloride.

**Note:** Separate procedures using copper or TBA sulfite are provided in this section for sulfur removal. They may be used separately or in combination, if desired.

11.5.1 Removal with copper (Reference 15).

**Note:** Some of the analytes in Table 2 are not amenable to sulfur removal with copper (e.g., atrazine and diazinon). Therefore, before using copper to remove sulfur from an extract that will be analyzed for any of the non-PCB analytes in Table 2, the laboratory must demonstrate that the analytes can be extracted from an aqueous sample matrix that contains sulfur and recovered from an extract treated with copper. Acceptable performance can be demonstrated through the preparation and analysis of a matrix spike sample that meets the QC requirements for recovery.

11.5.1.1 Quantitatively transfer the extract to a 40- to 50-mL flask or bottle. If there is evidence of water in the K–D or round-bottom flask after the transfer, rinse the flask with small portions of hexane:acetone (40:60) and add to the flask or bottle. Mark and set aside the concentration flask for future use.

11.5.1.2 Add 10–20 g of granular anhydrous sodium sulfate to the flask. Swirl to dry the extract.

11.5.1.3 Add activated copper (section 6.7.4.1.4) and allow to stand for 30–60 minutes, swirling occasionally. If the copper does not remain bright, add more and swirl occasionally for another 30–60 minutes.

11.5.1.4 After drying and sulfur removal, quantitatively transfer the extract to a nitrogen-evaporation vial or tube and proceed to section 10.3.3 for nitrogen evaporation and solvent exchange, taking care to leave the sodium sulfate and copper foil in the flask.

11.5.2 Removal with TBA sulfite.

11.5.2.1 Using small volumes of hexane, quantitatively transfer the extract to a 40- to 50-mL centrifuge tube with fluoropolymer-lined screw cap.

11.5.2.2 Add 1–2 mL of TBA sulfite reagent (section 6.7.4.2.4), 2–3 mL of 2-propanol, and approximately 0.7 g of sodium sulfite (section 6.7.4.2.2) crystals to

the tube. Cap and shake for 1–2 minutes. If the sample is colorless or if the initial color is unchanged, and if clear crystals (precipitated sodium sulfite) are observed, sufficient sodium sulfite is present. If the precipitated sodium sulfite disappears, add more crystalline sodium sulfite in approximately 0.5-g portions until a solid residue remains after repeated shaking.

11.5.2.3 Add 5–10 mL of reagent water and shake for 1–2 minutes. Centrifuge to settle the solids.

11.5.2.4 Quantitatively transfer the hexane (top) layer through a small funnel containing a few grams of granular anhydrous sodium sulfate to a nitrogen-evaporation vial or tube and proceed to section 10.3.3 for micro-concentration and solvent exchange.

11.6 Acid back extraction (section 6.1.2).

11.6.1 Quantitatively transfer the extract (section 10.3.1.5) to a 250-mL separatory funnel.

11.6.2 Partition the extract against 50 mL of sulfuric acid solution (section 6.1.2). Discard the aqueous layer. Repeat the acid washing until no color is visible in the aqueous layer, to a maximum of four washings.

11.6.3 Partition the extract against 50 mL of sodium chloride solution (section 6.7.5). Discard the aqueous layer.

11.6.4 Proceed to section 10.3.3 for micro-concentration and solvent exchange.

## 12. Gas Chromatography

12.1 Establish the same operating conditions used in section 7.1 for instrument calibration.

12.2 If the internal standard calibration procedure is used, add the internal standard solution (section 6.9.3) to the extract as close as possible to the time of injection to minimize the possibility of loss by

evaporation, adsorption, or reaction. For example, add 1  $\mu$ L of 10  $\mu$ g/mL internal standard solution into the extract, assuming no dilutions. Mix thoroughly.

12.3 Simultaneously inject an appropriate volume of the sample extract or standard solution onto both columns, using split, splitless, solvent purge, large-volume, or on-column injection. Alternatively, if using a single-column GC configuration, inject an appropriate volume of the sample extract or standard solution onto each GC column independently. If the sample is injected manually, the solvent-flush technique should be used. The injection volume depends upon the technique used and the sensitivity needed to meet MDLs or reporting limits for regulatory compliance. Injection volumes must be the same for all extracts. Record the volume injected to the nearest 0.05  $\mu$ L.

12.4 Set the data system or GC control to start the temperature program upon sample injection, and begin data collection after the solvent peak elutes. Set the data system to stop data collection after the last analyte is expected to elute and to return the column to the initial temperature.

12.5 Perform all qualitative and quantitative measurements as described in Sections 14 and 15. When standards and extracts are not being used for analyses, store them refrigerated at  $<6^{\circ}\text{C}$ , protected from light, in screw-cap vials equipped with unpierced fluoropolymer-lined septa.

## 13. System and Laboratory Performance

13.1 At the beginning of each shift during which standards or extracts are analyzed, GC system performance and calibration must be verified for all analytes and surrogates on both column/detector systems. Adjustment and/or recalibration (per section 7) are performed until all performance criteria are met. Only after all performance criteria are

met may samples, blanks and other QC samples, and standards be analyzed.

13.2 Inject an aliquot of the calibration verification standard (section 6.8.4) on both columns. Inject an aliquot of each of the multi-component standards.

13.3 Retention times—The absolute retention times of the peak maxima shall be within  $\pm 2$  seconds of the retention times in the calibration verification (section 7.8).

13.4 GC resolution—Resolution is acceptable if the valley height between two peaks (as measured from the baseline) is less than 40% of the shorter of the two peaks.

13.4.1 DB-608 column—DDT and endrin aldehyde

13.4.2 DB-1701 column—*alpha* and *gamma* chlordane

**Note:** If using other GC columns or stationary phases, these resolution criteria apply to these four target analytes and any other closely eluting analytes on those other GC columns.

13.5 Decomposition of DDT and endrin—If DDT, endrin, or their breakdown products are to be determined, this test must be performed prior to calibration verification (section 13.6). DDT decomposes to DDE and DDD. Endrin decomposes to endrin aldehyde and endrin ketone.

13.5.1 Inject 1  $\mu$ L of the DDT and endrin decomposition solution (section 6.8.7). As noted in section 6.8.7, other injection volumes may be used as long as the concentrations of DDT and endrin in the solution are adjusted to introduce the masses of the two analytes into the instrument that are listed in section 6.8.7.

13.5.2 Measure the areas of the peaks for DDT, DDE, DDD, endrin, endrin aldehyde, and endrin ketone in the chromatogram and calculate the percent breakdown as shown in the equations below:

$$\% \text{ breakdown of DDT} = \frac{\text{sum of degradation peak areas (DDD + DDE)}}{\text{sum of all peak areas (DDT + DDE + DDD)}} \times 100$$

% breakdown of Endrin

$$= \frac{\text{sum of degradation peak areas (Endrin aldehyde + Endrin ketone)}}{\text{sum of all peak areas (Endrin + Endrin aldehyde + Endrin ketone)}} \times 100$$

13.5.3 Both the % breakdown of DDT and of endrin must be less than 20%, otherwise the system is not performing acceptably for DDT and endrin. In this case, repair the GC column system that failed and repeat the performance tests (sections 13.2 to 13.6) until the specification is met.

**Note:** DDT and endrin decomposition are usually caused by accumulations of particulates in the injector and in the front end of the column. Cleaning and silanizing the injection port liner, and breaking off a short section of the front end of the column will usually eliminate the decomposition problem. Either of these corrective actions may affect retention times, GC resolution, and calibration linearity.

## 13.6 Calibration verification.

13.6.1 Compute the percent recovery of each analyte and of the coeluting analytes, based on the initial calibration data (section 7.5 or 7.6).

13.6.2 For each analyte or for coeluting analytes, compare the concentration with the limits for calibration verification in Table 4. For coeluting analytes, use the coeluting analyte with the least restrictive specification (the widest range). For analytes in Table 2 not listed in Table 4, QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 13 and 14). If the recoveries for all analytes meet the acceptance criteria, system performance is

acceptable and analysis of blanks and samples may continue. If, however, any recovery falls outside the calibration verification range, system performance is unacceptable for that analyte. If this occurs, repair the system and repeat the test (section 13.6), or prepare a fresh calibration standard and repeat the test, or recalibrate (section 7). See Section 8.1.7 for information on repeated test failures.

## 13.7 Laboratory control sample.

13.7.1 Analyze the extract of the LCS (section 6.8.3) extracted with each sample batch (Section 8.4). See Section 8.4 for criteria acceptance of the LCS.

13.7.2 It is suggested, but not required, that the laboratory update statements of data

quality. Add results that pass the specifications in section 13.7.3 to initial (section 8.7) and previous ongoing data. Update QC charts to form a graphic representation of continued laboratory performance. Develop a statement of laboratory data quality for each analyte by calculating the average percent recovery (R) and the standard deviation of percent recovery, sr. Express the accuracy as a recovery interval from  $R - 2sr$  to  $R + 2sr$ . For example, if  $R = 95\%$  and  $sr = 5\%$ , the accuracy is 85 to 105%.

13.8 Internal standard response—If internal standard calibration is used, verify that detector sensitivity has not changed by comparing the response (area or height) of each internal standard in the sample, blank, LCS, MS, and MSD to the response in calibration verification (section 6.8.3). The peak area or height of the internal standard should be within 50% to 200% ( $1/2$  to  $2x$ ) of its respective peak area or height in the verification standard. If the area or height is not within this range, compute the concentration of the analytes using the external standard method (section 7.5). If the analytes are affected, re-prepare and reanalyze the sample, blank, LCS, MS, or MSD, and repeat the pertinent test.

#### 14. Qualitative Identification

14.1 Identification is accomplished by comparison of data from analysis of a sample, blank, or other QC sample with data from calibration verification (section 7.7.1 or 13.5), and with data stored in the retention-time and calibration libraries (section 7.7). The retention time window is determined as described in section 14.2. Identification is confirmed when retention time agrees on both GC columns, as described below. Alternatively, GC/MS identification may be used to provide another means of identification.

##### 14.2 Establishing retention time windows.

14.2.1 Using the data from the multi-point initial calibration (section 7.4), determine the retention time in decimal minutes (not minutes:seconds) of each peak representing a single-component target analyte on each column/detector system. For the multi-component analytes, use the retention times of the five largest peaks in the chromatograms on each column/detector system.

14.2.2 Calculate the standard deviation of the retention times for each single-component analyte on each column/detector system and for the three to five exclusive (unique large) peaks for each multi-component analyte.

14.2.3 Define the width of the retention time window as three times that standard deviation. Establish the center of the retention time window for each analyte by using the absolute retention time for each analyte from the calibration verification standard at the beginning of the analytical shift. For samples run during the same shift as an initial calibration, use the retention time of the mid-point standard of the initial calibration. If the calculated RT window is less than 0.02 minutes, then use 0.02 minutes as the window.

**Note:** Procedures for establishing retention time windows from other sources may be employed provided that they are clearly documented and provide acceptable performance. Such performance may be evaluated using the results for the spiked QC samples described in this method, such as laboratory control samples and matrix spike samples.

14.2.4 The retention time windows must be recentered when a new GC column is installed or if a GC column has been shortened during maintenance to a degree that the retention times of analytes in the calibration verification standard have shifted close to the lower limits of the established retention time windows.

14.2.5 RT windows should be checked periodically by examining the peaks in spiked samples such as the LCS or MS/MSD to confirm that peaks for known analytes are properly identified.

14.2.6 If the retention time of an analyte in the calibration (Section 7.4) varies by more than 5 seconds across the calibration range as a function of the concentration of the standard, using the standard deviation of the retention times (section 14.2.3) to set the width of the retention time window may not adequately serve to identify the analyte in question under routine conditions. In such cases, data from additional analyses of standards may be required to adequately model the chromatographic behavior of the analyte.

##### 14.3 Identifying the analyte in a sample.

14.3.1 In order to identify a single-component analyte from analysis of a sample, blank, or other QC sample, the peak representing the analyte must fall within its respective retention time windows on both column/detector systems (as defined in section 14.2). That identification is further supported by the comparison of the numerical results on both columns, as described in section 15.7.

14.3.2 In order to identify a multi-component analyte, pattern matching (fingerprinting) may be used, or the three to five exclusive (unique and largest) peaks for that analyte must fall within their respective retention time windows on both column/detector systems (as defined in section 14.2). That identification is further supported by the comparison of the numerical results on both columns, as described in section 15.7. Alternatively, GC/MS identification may be used. Differentiation among some of the Aroclors may require evaluation of more than five peaks to ensure correct identification.

14.4 GC/MS confirmation. When the concentration of an analyte is sufficient and the presence or identity is suspect, its presence should be confirmed by GC/MS. In order to match the sensitivity of the GC/ECD, confirmation would need to be by GC/MS-SIM, or the estimated concentration would need to be 100 times higher than the GC/ECD calibration range. The extract may be concentrated by an additional amount to allow a further attempt at GC/MS confirmation.

14.5 Additional information that may aid the laboratory in the identification of an analyte. The occurrence of peaks eluting near the retention time of an analyte of interest

increases the probability of a false positive for the analyte. If the concentration is insufficient for confirmation by GC/MS, the laboratory may use the cleanup procedures in this method (section 11) on a new sample aliquot to attempt to remove the interferent. After attempts at cleanup are exhausted, the following steps may be helpful to assure that the substance that appears in the RT windows on both columns is the analyte of interest.

14.5.1 Determine the consistency of the RT data for the analyte on each column. For example, if the RT is very stable (*i.e.*, varies by no more than a few seconds) for the calibration, calibration verification, blank, LCS, and MS/MSD, the RT for the analyte of interest in the sample should be within this variation regardless of the window established in Section 14.2. If the analyte is not within this variation on both columns, it is likely not present.

14.5.2 The possibility exists that the RT for the analyte in a sample could shift if extraneous materials are present. This possibility may be able to be confirmed or refuted by the behavior of the surrogates in the sample. If multiple surrogates are used that span the length of the chromatographic run, the RTs for the surrogates on both columns are consistent with their RTs in calibration, calibration verification, blank, LCS, and MS/MSD, it is unlikely that the RT for the analyte of interest has shifted.

14.5.3 If the RT for the analyte is shifted slightly later on one column and earlier on the other, and the surrogates have not shifted, it is highly unlikely that the analyte is present, because shifts nearly always occur in the same direction on both columns.

#### 15. Quantitative Determination

15.1 External standard quantitation—Calculate the concentration of the analyte in the extract using the calibration curve or average calibration factor determined in calibration (section 7.5.2) and the following equation:

$$C_{\text{ex}} = \frac{A_s}{CF}$$

where:

$C_{\text{ex}}$  = Concentration of the analyte in the extract (ng/mL)

$A_s$  = Peak height or area for the analyte in the standard or sample

CF = Calibration factor, as defined in Section 7.5.1

15.2 Internal standard quantitation—Calculate the concentration of the analyte in the extract using the calibration curve or average response factor determined in calibration (section 7.6.2) and the following equation:

$$C_{\text{ex}} = \frac{A_s \times C_{\text{IS}}}{A_{\text{IS}} \times \text{RF}}$$

where:

$C_{\text{ex}}$  = Concentration of the analyte in the extract (ng/mL)

$A_s$  = Peak height or area for the analyte in the standard or sample

$C_{\text{IS}}$  = Concentration of the internal standard (ng/mL)

$A_{is}$  = Area of the internal standard  
 RF = Response factor, as defined in section 7.6.1

15.3 Calculate the concentration of the analyte in the sample using the concentration in the extract, the extract volume, the sample volume, and the dilution factor, per the following equation:

$$C_s = \frac{C_{ex} \times V_{ex} \times DF}{V_s \times 1000}$$

where:

$C_s$  = Concentration of the analyte in the sample ( $\mu\text{g/L}$ )  
 $V_{ex}$  = Final extract volume (mL)  
 $C_{ex}$  = Concentration in the extract (ng/mL)  
 $V_s$  = Volume of sample (L)  
 DF = Dilution factor

and the factor of 1,000 in the denominator converts the final units from ng/L to  $\mu\text{g/L}$

15.4 If the concentration of any target analyte exceeds the calibration range, either extract and analyze a smaller sample volume, or dilute and analyze the diluted extract.

15.5 Quantitation of multi-component analytes.

15.5.1 PCBs as Aroclors. Quantify an Aroclor by comparing the sample chromatogram to that of the most similar Aroclor standard as indicated in section 14.3.2. Compare the responses of 3 to 5 major peaks in the calibration standard for that Aroclor with the peaks observed in the sample extract. The amount of Aroclor is calculated using the individual calibration factor for each of the 3 to 5 characteristic peaks chosen in section 7.5.1. Determine the concentration of each of the characteristic peaks, using the average calibration factor calculated for that peak in section 7.5.2, and then those 3 to 5 concentrations are averaged to determine the concentration of that Aroclor.

15.5.2 Other multi-component analytes. Quantify any other multi-component analytes (technical chlordane or toxaphene) using the same peaks used to develop the average calibration factors in section 7.5.2. Determine the concentration of each of the characteristic peaks, and then the concentrations represented by those characteristic peaks are averaged to determine the concentration of the analyte. Alternatively, for toxaphene, the analyst may determine the calibration factor in section 7.5.2 by summing the areas of all of the peaks for the analyte and using the

summed of the peak areas in the sample chromatogram to determine the concentration. However, the approach used for toxaphene must be the same for the calibration and the sample analyses.

15.6 Reporting of results. As noted in section 1.6.1, EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described here are focused on such monitoring needs and may not be relevant to other uses of the method.

15.6.1 Report results for wastewater samples in  $\mu\text{g/L}$  without correction for recovery. (Other units may be used if required by in a permit.) Report all QC data with the sample results.

15.6.2 Reporting level. Unless specified otherwise by a regulatory authority or in a discharge permit, results for analytes that meet the identification criteria are reported down to the concentration of the ML established by the laboratory through calibration of the instrument (see section 7.5 or 7.6 and the glossary for the derivation of the ML). EPA considers the terms "reporting limit," "quantitation limit," and "minimum level" to be synonymous.

15.6.2.1 Report the lower result from the two columns (see section 15.7 below) for each analyte in each sample or QC standard at or above the ML to 3 significant figures. Report a result for each analyte in each sample or QC standard below the ML as "<ML," where "ML" is the concentration of the analyte at the ML (e.g., if the ML is 10  $\mu\text{g/L}$ , then report the result as <10  $\mu\text{g/L}$ ), or as required by the regulatory authority or permit. Report a result for each analyte in a blank at or above the MDL to 2 significant figures. Report a result for each analyte found in a blank below the MDL as "<MDL," where MDL is the concentration of the analyte at the MDL, or as required by the regulatory/control authority or permit.

15.6.2.2 In addition to reporting results for samples and blank(s) separately, the concentration of each analyte in a blank or field blank associated with that sample may be subtracted from the result for that sample, but only if requested or required by a regulatory authority or in a permit. In this case, both the sample result and the blank results must be reported together.

15.6.2.3 Report the result for an analyte in a sample or extract that has been diluted

at the least dilute level at which the peak area is within the calibration range (i.e., above the ML for the analyte) and the MS/MSD recovery and RPD are within their respective QC acceptance criteria (Table 4). This may require reporting results for some analytes from different analyses. Results for each analyte in MS/MSD samples should be reported from the same GC column as used to report the results for that analyte in the unspiked sample. If the MS/MSD recoveries and RPDs calculated in this manner do not meet the acceptance criteria in Table 4, the analyst may use the results from the other GC column to determine if the MS/MSD results meet the acceptance criteria. If such a situation occurs, the results for the sample should be recalculated using the same GC column data as used for the MS/MSD samples, and reported with appropriate annotations that alert the data user of the issue.

15.6.2.4 Results from tests performed with an analytical system that is not in control (i.e., that does not meet acceptance criteria for all of QC tests in this method) must not be reported or otherwise used for permitting or regulatory compliance purposes, but do not relieve a discharger or permittee of reporting timely results. See section 8.1.7 for dispositions of failures. If the holding time would be exceeded for a re-analysis of the sample, the regulatory/control authority should be consulted for disposition.

15.6.3 Analyze the sample by GC/MS or on a third column when analytes have co-eluted or interfere with determination on both columns.

**Note:** Dichlone and kepone do not elute from the DB-1701 column and must be confirmed on a DB-5 column, or by GC/MS.

15.7 Quantitative information that may aid in the confirmation of the presence of an analyte.

15.7.1 As noted in Section 14.3, the relative agreement between the numerical results from the two GC columns may be used to support the identification of the target analyte by providing evidence that co-eluting interferences are not present at the retention time of the target analyte. Calculate the percent difference (%D) between the results for the analyte from both columns, as follows:

$$\%D = \frac{\text{Higher result} - \text{Lower result}}{\text{Higher result}} \times 100$$

In general, if the %D of the two results is less than 50% (e.g., a factor of 2), then the pesticide is present. This %D is generous and allows for the pesticide that has the largest measurement error.

**Note:** Laboratories may employ metrics less than 50% for this comparison, including those specified in other analytical methods for these pesticides (e.g., CLP or SW-846).

15.7.2 If the amounts do not agree, and the RT data indicate the presence of the

analyte (per Section 14), it is likely that a positive interference is present on the column that yielded the higher result. That interferent may be represented by a separate peak on the other column that does not coincide with the retention time of any of the target analytes. If the interfering peak is evident on the other column, report the result from that column and advise the data user that the interference resulted in a %D value greater than 50%. If an interferent is not

identifiable on the second column, then the results must be reported as "not detected" at the lower concentration. In this event, the pesticide is not confirmed and the reporting limit is elevated. See section 8.1.7 for disposition of problem results.

**Note:** The resulting elevation of the reporting limit may not meet the requirements for compliance monitoring and the use of additional cleanup procedures may be required.

## 16. Analysis of Complex Samples

16.1 Some samples may contain high levels (greater than 1 µg/L) of the analytes of interest, interfering analytes, and/or polymeric materials. Some samples may not concentrate to 1.0 mL (section 10.3.3.3.2); others may overload the GC column and/or detector.

16.2 When an interference is known or suspected to be present, the laboratory should attempt to clean up the sample extract using the SPE cartridge (section 11.2), by Florisil® (Section 11.3), Alumina (Section 11.4), sulfur removal (section 11.5), or another clean up procedure appropriate to the analytes of interest. If these techniques do not remove the interference, the extract is diluted by a known factor and reanalyzed (section 12). Dilution until the extract is lightly colored is preferable. Typical dilution factors are 2, 5, and 10.

16.3 Recovery of surrogate(s)—In most samples, surrogate recoveries will be similar to those from reagent water. If surrogate recovery is outside the limits developed in Section 8.6, re-extract and reanalyze the sample if there is sufficient sample and if it is within the 7-day extraction holding time. If surrogate recovery is still outside this range, extract and analyze one-tenth the volume of sample to overcome any matrix interference problems. If a sample is highly colored or suspected to be high in concentration, a 1-L sample aliquot and a 100-mL sample aliquot could be extracted simultaneously and still meet the holding time criteria, while providing information about a complex matrix.

16.4 Recovery of the matrix spike and matrix spike duplicate (MS/MSD)—In most samples, MS/MSD recoveries will be similar to those from reagent water. If either the MS or MSD recovery is outside the range specified in Section 8.3.3, one-tenth the volume of sample is spiked and analyzed. If the matrix spike recovery is still outside the range, the result for the unspiked sample may not be reported or used for permitting or regulatory compliance purposes. See Section 8.1.7 for dispositions of failures. Poor matrix spike recovery does not relieve a discharger or permittee of reporting timely results.

## 17. Method Performance

17.1 This method was tested for linearity of spike recovery from reagent water and has been demonstrated to be applicable over the concentration range from 4x MDL to 1000x MDL with the following exceptions: Chlordane recovery at 4x MDL was low (60%); Toxaphene recovery was demonstrated linear over the range of 10x MDL to 1000x MDL (Reference 3).

17.2 The 1984 version of this method was tested by 20 laboratories using reagent water, drinking water, surface water, and three industrial wastewaters spiked at six concentrations (Reference 2). Concentrations used in the study ranged from 0.5 to 30 µg/L for single-component pesticides and from 8.5 to 400 µg/L for multi-component analytes. These data are for a subset of analytes described in the current version of the method.

17.3 During the development of Method 1656, a similar EPA procedure for the

organochlorine pesticides, single-operator precision, overall precision, and method accuracy were found to be directly related to the concentration of the analyte and essentially independent of the sample matrix. Linear equations to describe these relationships are presented in Table 5.

## 18. Pollution Prevention

18.1 Pollution prevention encompasses any technique that reduces or eliminates the quantity or toxicity of waste at the point of generation. Many opportunities for pollution prevention exist in laboratory operations. EPA has established a preferred hierarchy of environmental management techniques that places pollution prevention as the management option of first choice. Whenever feasible, the laboratory should use pollution prevention techniques to address waste generation. When wastes cannot be reduced at the source, the Agency recommends recycling as the next best option.

18.2 The analytes in this method are used in extremely small amounts and pose little threat to the environment when managed properly. Standards should be prepared in volumes consistent with laboratory use to minimize the disposal of excess volumes of expired standards. This method utilizes significant quantities of methylene chloride. Laboratories are encouraged to recover and recycle this and other solvents during extract concentration.

18.3 For information about pollution prevention that may be applied to laboratories and research institutions, consult "Less is Better: Laboratory Chemical Management for Waste Reduction" (Reference 19), available from the American Chemical Society's Department of Governmental Relations and Science Policy, 1155 16th Street NW., Washington DC 20036, 202-872-4477.

## 19. Waste Management

19.1 The laboratory is responsible for complying with all Federal, State, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions, and to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. An overview of requirements can be found in Environmental Management Guide for Small Laboratories (EPA 233-B-98-001).

19.2 Samples at pH <2, or pH >12, are hazardous and must be handled and disposed of as hazardous waste, or neutralized and disposed of in accordance with all federal, state, and local regulations. It is the laboratory's responsibility to comply with all federal, state, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions. The laboratory using this method has the responsibility to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. For further information on waste management,

see "The Waste Management Manual for Laboratory Personnel," also available from the American Chemical Society at the address in section 18.3.

19.3 Many analytes in this method decompose above 500 °C. Low-level waste such as absorbent paper, tissues, animal remains, and plastic gloves may be burned in an appropriate incinerator. Gross quantities of neat or highly concentrated solutions of toxic or hazardous chemicals should be packaged securely and disposed of through commercial or governmental channels that are capable of handling toxic wastes.

19.4 For further information on waste management, consult The Waste Management Manual for Laboratory Personnel and Less is Better-Laboratory Chemical Management for Waste Reduction, available from the American Chemical Society's Department of Governmental Relations and Science Policy, 1155 16th Street NW., Washington, DC 20036, 202-872-4477.

## 20. References

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  18. USEPA, 2007, Method 1699: Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS, EPA-821-R-08-001, December 2007.
  19. “Less is Better,” American Chemical Society on-line publication, <http://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/less-is-better.pdf>.
  20. EPA Method 608 ATP 3M0222, An alternative test procedure for the measurement of organochlorine pesticides and polychlorinated biphenyls in waste water. **Federal Register**, Vol. 60, No. 148 August 2, 1995.
  21. Tables

TABLE 1—PESTICIDES <sup>1</sup>

Analyte	CAS No.	MDL <sup>2</sup> (ng/L)	ML <sup>3</sup> (ng/L)
Aldrin	309-00-2	4	12
alpha-BHC	319-84-6	3	9
beta-BHC	319-85-7	6	18
delta-BHC	319-86-8	9	27
gamma-BHC (Lindane)	58-89-9	4	12
alpha-Chlordane <sup>4</sup>	5103-71-9	14	42
gamma-Chlordane <sup>4</sup>	5103-74-2	14	42
4,4'-DDD	72-54-8	11	33
4,4'-DDE	72-55-9	4	12
4,4'-DDT	50-29-3	12	36
Dieldrin	60-57-1	2	6
Endosulfan I	959-98-8	14	42
Endosulfan II	33213-65-9	4	12
Endosulfan sulfate	1031-07-8	66	198
Endrin	72-20-8	6	18
Endrin aldehyde	7421-93-4	23	70
Heptachlor	76-44-8	3	9
Heptachlor epoxide	1024-57-3	83	249

<sup>1</sup> All analytes in this table are Priority Pollutants (40 CFR part 423, appendix A).

<sup>2</sup> 40 CFR part 136, appendix B, June 30, 1986.

<sup>3</sup> ML = Minimum Level—see Glossary for definition and derivation, calculated as 3 times the MDL.

<sup>4</sup> MDL based on the MDL for Chlordane.

TABLE 2—ADDITIONAL ANALYTES

Analyte	CAS No.	MDL <sup>3</sup> (ng/L)	ML <sup>4</sup> (ng/L)
Acephate	30560-19-1		
Alachlor	15972-60-8		
Atrazine	1912-24-9		
Benfluralin (Benefin)	1861-40-1		
Bromacil	314-40-9		
Bromoxynil octanoate	1689-99-2		
Butachlor	23184-66-9		
Captafol	2425-06-1		
Captan	133-06-2		
Carbophenothion (Trithion)	786-19-6		
Chlorobenzilate	510-15-6		
Chloroneb (Terraneb)	2675-77-6		
Chloropropylate (Acaralate)	5836-10-2		
Chlorothalonil	1897-45-6		
Cyanazine	21725-46-2		
DCPA (Dacthal)	1861-32-1		
2,4'-DDD	53-19-0		
2,4'-DDE	3424-82-6		
2,4'-DDT	789-02-6		
Diallate (Avadex)	2303-16-4		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8		
Dichlone	117-80-6		
Dichloran	99-30-9		
Dicofol	115-32-2		

TABLE 2—ADDITIONAL ANALYTES—Continued

Analyte	CAS No.	MDL <sup>3</sup> (ng/L)	ML <sup>4</sup> (ng/L)
Endrin ketone	53494-70-5		
Ethalfuralin (Sonalan)	55283-68-6		
Etridiazole	2593-15-9		
Fenarimol (Rubigan)	60168-88-9		
Hexachlorobenzene <sup>1</sup>	118-74-1		
Hexachlorocyclopentadiene <sup>1</sup>	77-47-4		
Isodrin	465-73-6		
Isopropalin (Paarlan)	33820-53-0		
Kepone	143-50-0		
Methoxychlor	72-43-5		
Metolachlor	51218-45-2		
Metribuzin	21087-64-9		
Mirex	2385-85-5		
Nitrofen (TOK)	1836-75-5		
cis-Nonachlor	5103-73-1		
trans-Nonachlor	39765-80-5		
Norfluorazon	27314-13-2		
Octachlorostyrene	29082-74-4		
Oxychlorane	27304-13-8		
PCNB (Pentachloronitrobenzene)	82-68-8		
Pendamethalin (Prowl)	40487-42-1		
cis-Permethrin	61949-76-6		
trans-Permethrin	61949-77-7		
Perthane (Ethylan)	72-56-0		
Propachlor	1918-16-7		
Propanil	709-98-8		
Propazine	139-40-2		
Quintozene	82-68-8		
Simazine	122-34-9		
Strobane	8001-50-1		
Technazene	117-18-0		
Technical Chlordane <sup>2</sup>			
Terbacil	5902-51-2		
Terbuthylazine	5915-41-3		
Toxaphene <sup>1</sup>	8001-35-2	240	720
Trifluralin	1582-09-8		
PCB-1016 <sup>1</sup>	12674-11-2		
PCB-1221 <sup>1</sup>	11104-28-2		
PCB-1232 <sup>1</sup>	11141-16-5		
PCB-1242 <sup>1</sup>	53469-21-9	65	95
PCB-1248 <sup>1</sup>	12672-29-6		
PCB-1254 <sup>1</sup>	11097-69-1		
PCB-1260 <sup>1</sup>	11096-82-5		
PCB-1268	11100-14-4		

<sup>1</sup> Priority Pollutants (40 CFR part 423, appendix A).

<sup>2</sup> Technical Chlordane may be used in cases where historical reporting has only been for this form of Chlordane.

<sup>3</sup> 40 CFR part 136, appendix B, June 30, 1986.

<sup>4</sup> ML = Minimum Level—see Glossary for definition and derivation, calculated as 3 times the MDL.

TABLE 3—EXAMPLE RETENTION TIMES<sup>1</sup>

Analyte	Retention time (min) <sup>2</sup>	
	DB-608	DB-1701
Acephate	5.03	( <sup>3</sup> )
Trifluralin	5.16	6.79
Ethalfuralin	5.28	6.49
Benfluralin	5.53	6.87
Diallate-A	7.15	6.23
Diallate-B	7.42	6.77
alpha-BHC	8.14	7.44
PCNB	9.03	7.58
Simazine	9.06	9.29
Atrazine	9.12	9.12
Terbuthylazine	9.17	9.46
gamma-BHC (Lindane)	9.52	9.91
beta-BHC	9.86	11.90
Heptachlor	10.66	10.55
Chlorothalonil	10.66	10.96

TABLE 3—EXAMPLE RETENTION TIMES<sup>1</sup>—Continued

Analyte	Retention time (min) <sup>2</sup>	
	DB-608	DB-1701
Dichlone .....	10.80	( <sup>4</sup> )
Terbacil .....	11.11	12.63
<i>delta</i> -BHC .....	11.20	12.98
Alachlor .....	11.57	11.06
Propanil .....	11.60	14.10
Aldrin .....	11.84	11.46
DCPA .....	12.18	12.09
Metribuzin .....	12.80	11.68
Triadimefon .....	12.99	13.57
Isopropalin .....	13.06	13.37
Isodrin .....	13.47	11.12
Heptachlor epoxide .....	13.97	12.56
Pendamethalin .....	14.21	13.46
Bromacil .....	14.39	( <sup>3</sup> )
<i>alpha</i> -Chlordane .....	14.63	14.20
Butachlor .....	15.03	15.69
<i>gamma</i> -Chlordane .....	15.24	14.36
Endosulfan I .....	15.25	13.87
4,4'-DDE .....	16.34	14.84
Dieldrin .....	16.41	15.25
Captan .....	16.83	15.43
Chlorobenzilate .....	17.58	17.28
Endrin .....	17.80	15.86
Nitrofen (TOK) .....	17.86	17.47
Kepone .....	17.92	( <sup>3,5</sup> )
4,4'-DDD .....	18.43	17.77
Endosulfan II .....	18.45	18.57
Bromoxynil octanoate .....	18.85	18.57
4,4'-DDT .....	19.48	18.32
Carbophenothion .....	19.65	18.21
Endrin aldehyde .....	19.72	19.18
Endosulfan sulfate .....	20.21	20.37
Captafol .....	22.51	21.22
Norfluorazon .....	20.68	22.01
Mirex .....	22.75	19.79
Methoxychlor .....	22.80	20.68
Endrin ketone .....	23.00	21.79
Fenarimol .....	24.53	23.79
<i>cis</i> -Permethrin .....	25.00	23.59
<i>trans</i> -Permethrin .....	25.62	23.92
PCB-1016 .....		
PCB-1221 .....		
PCB-1232 .....		
PCB-1242 .....		
PCB-1248 .....		
PCB-1254 .....		
PCB-1260 (5 peaks) .....	15.44	14.64
	15.73	15.36
	16.94	16.53
	17.28	18.70
	19.17	19.92
Toxaphene (5 peaks) .....	16.60	16.60
	17.37	17.52
	18.11	17.92
	19.46	18.73
	19.69	19.00

<sup>1</sup> Data from EPA Method 1656 (Reference 16).

<sup>2</sup> Columns: 30-m long x 0.53-mm ID fused-silica capillary; DB-608, 0.83  $\mu$ m; and DB-1701, 1.0  $\mu$ m.

Conditions suggested to meet retention times shown: 150 °C for 0.5 minute, 150–270 °C at 5 °C/min, and 270 °C until *trans*-Permethrin elutes. Carrier gas flow rates approximately 7 mL/min.

<sup>3</sup> Does not elute from DB-1701 column at level tested.

<sup>4</sup> Not recovered from water at the levels tested.

<sup>5</sup> Dichlone and Kepone do not elute from the DB-1701 column and should be confirmed on DB-5.

TABLE 4—QC ACCEPTANCE CRITERIA

Analyte	Calibration verification (%)	Test concentration (µg/L)	Limit for s (% SD)	Range for $\bar{X}$ (%)	Range for P (%)	Maximum MS/MSD RPD (%)
Aldrin	75–125	2.0	25	54–130	42–140	35
alpha-BHC	69–125	2.0	28	49–130	37–140	36
beta-BHC	75–125	2.0	38	39–130	17–147	44
delta-BHC	75–125	2.0	43	51–130	19–140	52
gamma-BHC	75–125	2.0	29	43–130	32–140	39
alpha-Chlordane	73–125	50.0	24	55–130	45–140	35
gamma-Chlordane	75–125	50.0	24	55–130	45–140	35
4,4'-DDD	75–125	10.0	32	48–130	31–141	39
4,4'-DDE	75–125	2.0	30	54–130	30–145	35
4,4'-DDT	75–125	10.0	39	46–137	25–160	42
Dieldrin	48–125	2.0	42	58–130	36–146	49
Endosulfan I	75–125	2.0	25	57–141	45–153	28
Endosulfan II	75–125	10.0	63	22–171	D–202	53
Endosulfan sulfate	70–125	10.0	32	38–132	26–144	38
Endrin	5–125	10.0	42	51–130	30–147	48
Heptachlor	75–125	2.0	28	43–130	34–140	43
Heptachlor epoxide	75–125	2.0	22	57–132	37–142	26
Toxaphene	68–134	50.0	30	56–130	41–140	41
PCB–1016	75–125	50.0	24	61–103	50–140	36
PCB–1221	75–125	50.0	50	44–150	15–178	48
PCB–1232	75–125	50.0	32	28–197	10–215	25
PCB–1242	75–125	50.0	26	50–139	39–150	29
PCB–1248	75–125	50.0	32	58–140	38–158	35
PCB–1254	75–125	50.0	34	44–130	29–140	45
PCB–1260	75–125	50.0	28	37–130	8–140	38

S = Standard deviation of four recovery measurements for the DOC (section 8.2.4).

$\bar{X}$  = Average of four recovery measurements for the DOC (section 8.2.4).

P = Recovery for the LCS (section 8.4.3).

**Note:** These criteria were developed from data in Table 5 (Reference 2). Where necessary, limits for recovery have been broadened to assure applicability to concentrations below those in Table 5.

TABLE 5—PRECISION AND RECOVERY AS FUNCTIONS OF CONCENTRATION

Analyte	Recovery, $X'$ (µg/L)	Single analyst precision, $s_r'$ (µg/L)	Overall precision, $S'$ (µg/L)
Aldrin	0.81C + 0.04	0.16( $\bar{X}$ ) – 0.04	0.20( $\bar{X}$ ) – 0.01
alpha-BHC	0.84C + 0.03	0.13( $\bar{X}$ ) + 0.04	0.23( $\bar{X}$ ) – 0.00
beta-BHC	0.81C + 0.07	0.22( $\bar{X}$ ) – 0.02	0.33( $\bar{X}$ ) – 0.05
delta-BHC	0.81C + 0.07	0.18( $\bar{X}$ ) + 0.09	0.25( $\bar{X}$ ) + 0.03
gamma-BHC (Lindane)	0.82C – 0.05	0.12( $\bar{X}$ ) + 0.06	0.22( $\bar{X}$ ) + 0.04
Chlordane	0.82C – 0.04	0.13( $\bar{X}$ ) + 0.13	0.18( $\bar{X}$ ) + 0.18
4,4'-DDD	0.84C + 0.30	0.20( $\bar{X}$ ) – 0.18	0.27( $\bar{X}$ ) – 0.14
4,4'-DDE	0.85C + 0.14	0.13( $\bar{X}$ ) + 0.06	0.28( $\bar{X}$ ) – 0.09
4,4'-DDT	0.93C – 0.13	0.17( $\bar{X}$ ) + 0.39	0.31( $\bar{X}$ ) – 0.21
Dieldrin	0.90C + 0.02	0.12( $\bar{X}$ ) + 0.19	0.16( $\bar{X}$ ) + 0.16
Endosulfan I	0.97C + 0.04	0.10( $\bar{X}$ ) + 0.07	0.18( $\bar{X}$ ) + 0.08
Endosulfan II	0.93C + 0.34	0.41( $\bar{X}$ ) – 0.65	0.47( $\bar{X}$ ) – 0.20
Endosulfan sulfate	0.89C – 0.37	0.13( $\bar{X}$ ) + 0.33	0.24( $\bar{X}$ ) + 0.35
Endrin	0.89C – 0.04	0.20( $\bar{X}$ ) + 0.25	0.24( $\bar{X}$ ) + 0.25
Heptachlor	0.69C + 0.04	0.06( $\bar{X}$ ) + 0.13	0.16( $\bar{X}$ ) + 0.08
Heptachlor epoxide	0.89C + 0.10	0.18( $\bar{X}$ ) – 0.11	0.25( $\bar{X}$ ) – 0.08
Toxaphene	0.80C + 1.74	0.09( $\bar{X}$ ) + 3.20	0.20( $\bar{X}$ ) + 0.22
PCB–1016	0.81C + 0.50	0.13( $\bar{X}$ ) + 0.15	0.15( $\bar{X}$ ) + 0.45
PCB–1221	0.96C + 0.65	0.29( $\bar{X}$ ) – 0.76	0.35( $\bar{X}$ ) – 0.62
PCB–1232	0.91C + 10.8	0.21( $\bar{X}$ ) – 1.93	0.31( $\bar{X}$ ) + 3.50
PCB–1242	0.93C + 0.70	0.11( $\bar{X}$ ) + 1.40	0.21( $\bar{X}$ ) + 1.52
PCB–1248	0.97C + 1.06	0.17( $\bar{X}$ ) + 0.41	0.25( $\bar{X}$ ) – 0.37
PCB–1254	0.76C + 2.07	0.15( $\bar{X}$ ) + 1.66	0.17( $\bar{X}$ ) + 3.62
PCB–1260	0.66C + 3.76	0.22( $\bar{X}$ ) – 2.37	0.39( $\bar{X}$ ) – 4.86

$X'$  = Expected recovery for one or more measurements of a sample containing a concentration of C, in µg/L.

TABLE 6—DISTRIBUTION OF CHLORINATED PESTICIDES AND PCBs INTO FLORISIL® COLUMN FRACTIONS

Analyte	Percent Recovery by Fraction <sup>1</sup>		
	1	2	3
Aldrin	100		
alpha-BHC	100		
beta-BHC	97		
delta-BHC	98		
gamma-BHC (Lindane)	100		
Chlordane	100		
4,4'-DDD	99		
4,4'-DDE		98	
4,4'-DDT	100		
Dieldrin	0	100	
Endosulfan I	37	64	
Endosulfan II	0	7	91
Endosulfan sulfate	0	0	106
Endrin	4	96	
Endrin aldehyde	0	68	26
Heptachlor	100		
Heptachlor epoxide	100		
Toxaphene	96		
PCB-1016	97		
PCB-1221	97		
PCB-1232	95	4	
PCB-1242	97		
PCB-1248	103		
PCB-1254	90		
PCB-1260			

<sup>1</sup> Eluant composition:  
 Fraction 1—6% ethyl ether in hexane.  
 Fraction 2—15% ethyl ether in hexane.  
 Fraction 3—50% ethyl ether in hexane.

TABLE 7—SUGGESTED CALIBRATION GROUPS<sup>1</sup>

Analyte	
<i>Calibration Group 1:</i>	
Acephate	
Alachlor	
Atrazine	
beta-BHC	
Bromoxynil octanoate	
Captafol	
Diallate	
Endosulfan sulfate	
Endrin	
Isodrin	
Pendimethalin (Prowl)	
trans-Permethrin	
<i>Calibration Group 2:</i>	
alpha-BHC	
DCPA	
4,4'-DDE	
4,4'-DDT	
Dichlone	
Ethalfuralin	
Fenarimol	
Methoxychlor	
Metribuzin	
<i>Calibration Group 3:</i>	
gamma-BHC (Lindane)	
gamma-Chlordane	

TABLE 7—SUGGESTED CALIBRATION GROUPS<sup>1</sup>—Continued

Analyte	
Endrin ketone	
Heptachlor epoxide	
Isopropalin	
Nitrofen (TOK)	
PCNB	
cis-Permethrin	
Trifluralin	
<i>Calibration Group 4:</i>	
Benfluralin	
Chlorobenzilate	
Dieldrin	
Endosulfan I	
Mirex	
Terbacil	
Terbutylazine	
Triadimefon	
<i>Calibration Group 5:</i>	
alpha-Chlordane	
Captan	
Chlorothalonil	
4,4'-DDD	
Norfluorazon	
Simazine	
<i>Calibration Group 6:</i>	
Aldrin	
delta-BHC	

TABLE 7—SUGGESTED CALIBRATION GROUPS<sup>1</sup>—Continued

Analyte	
Bromacil	
Butachlor	
Endosulfan II	
Heptachlor	
Kepone	
<i>Calibration Group 7:</i>	
Carbophenothion	
Chloroneb	
Chloropropylate	
DBCP	
Dicofol	
Endrin aldehyde	
Etridiazone	
Perthane	
Propachlor	
Propanil	
Propazine	

<sup>1</sup> The analytes may be organized in other calibration groups, provided that there are no coelution problems and that all QC requirements are met.

22. Figures

BILLING CODE 6560-50-P

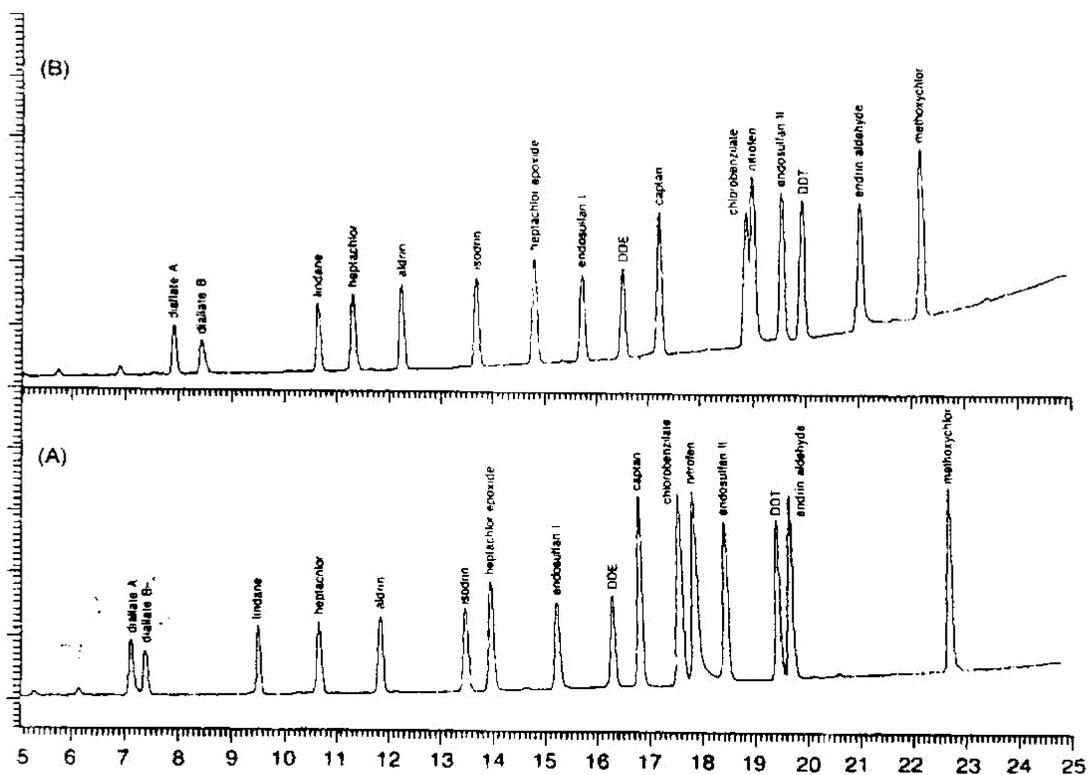


Figure 1 Example Chromatogram of Selected Organochlorine Pesticides

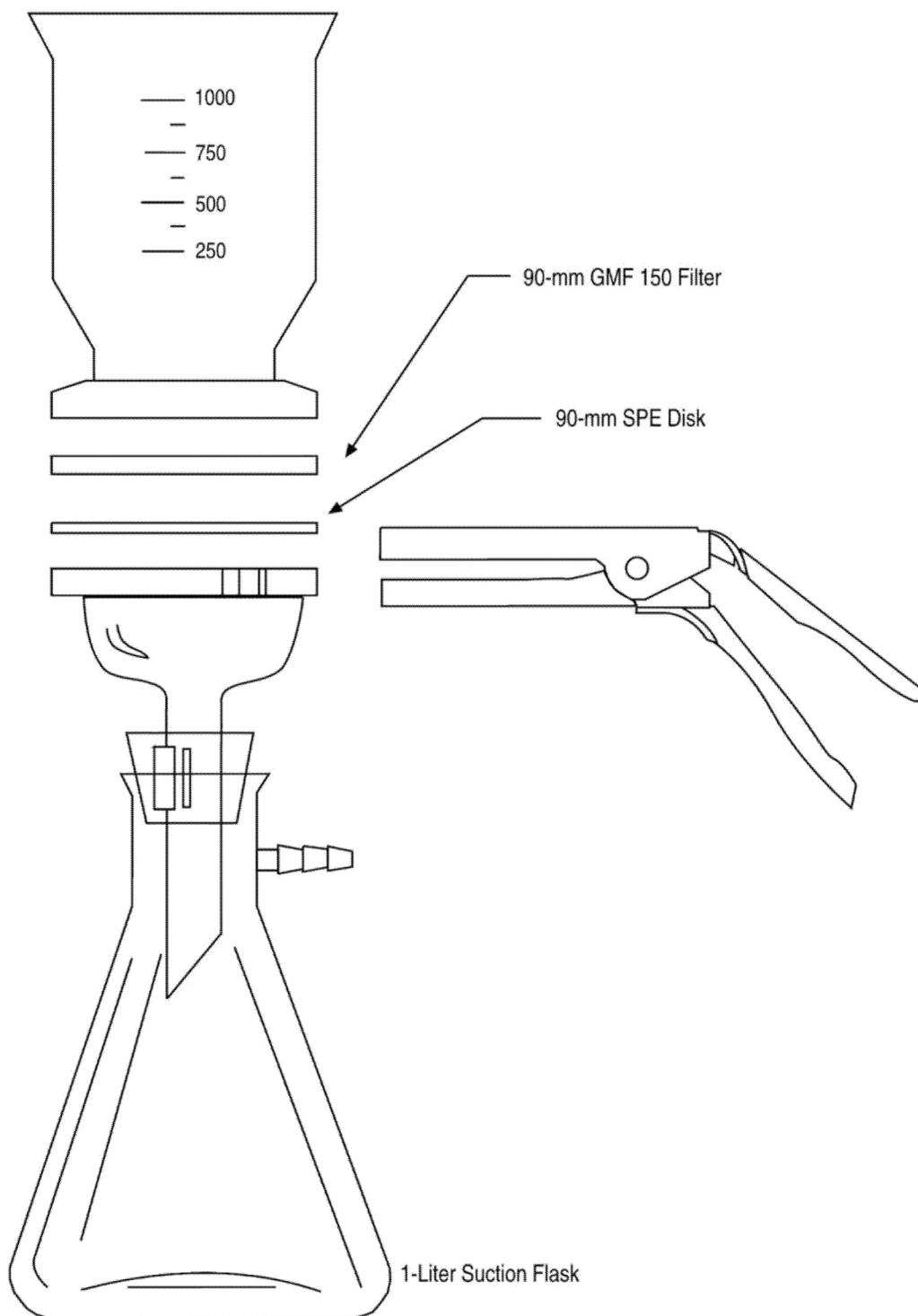


Figure 2 Disk-based solid-phase extraction apparatus

**BILLING CODE 6560-50-C**

23. Glossary

These definitions and purposes are specific to this method but have been conformed to common usage to the extent possible.

23.1 Units of weight and measure and their abbreviations.

23.1.1 Symbols.

°C	degrees Celsius
μg	microgram
μL	microliter
<	less than
≤	less than or equal to
>	greater than

% percent

23.1.2 Abbreviations (in alphabetical order).

cm	centimeter
g	gram
hr	hour
ID	inside diameter

in. inch  
 L liter  
 M molar solution—one mole or gram molecular weight of solute in one liter of solution  
 mg milligram  
 min minute  
 mL milliliter  
 mm millimeter  
 N Normality—one equivalent of solute in one liter of solution  
 ng nanogram  
 psia pounds-per-square inch absolute  
 psig pounds-per-square inch gauge  
 v/v volume per unit volume  
 w/v weight per unit volume

### 23.2 Definitions and acronyms (in alphabetical order)

**Analyte**—A compound or mixture of compounds (e.g., PCBs) tested for by this method. The analytes are listed in Tables 1 and 2.

**Analytical batch**—The set of samples analyzed on a given instrument during a 24-hour period that begins and ends with calibration verification (sections 7.8 and 13). See also “Extraction batch.”

**Blank (method blank; laboratory blank)**—An aliquot of reagent water that is treated exactly as a sample including exposure to all glassware, equipment, solvents, reagents, internal standards, and surrogates that are used with samples. The blank is used to determine if analytes or interferences are present in the laboratory environment, the reagents, or the apparatus.

**Calibration factor (CF)**—See section 7.5.1.

**Calibration standard**—A solution prepared from stock solutions and/or a secondary standards and containing the analytes of interest, surrogates, and internal standards. This standard is used to model the response of the GC instrument against analyte concentration.

**Calibration verification**—The process of confirming that the response of the analytical system remains within specified limits of the calibration.

**Calibration verification standard**—The standard (section 6.8.4) used to verify calibration (sections 7.8 and 13.6).

**Extraction Batch**—A set of up to 20 field samples (not including QC samples) started through the extraction process in a given 24-hour shift. Each extraction batch of 20 or fewer samples must be accompanied by a blank (section 8.5), a laboratory control sample (LCS, section 8.4), a matrix spike and duplicate (MS/MSD; section 8.3), resulting in a minimum of five samples (1 field sample, 1 blank, 1 LCS, 1 MS, and 1 MSD) and a maximum of 24 samples (20 field samples, 1 blank, 1 LCS, 1 MS, and 1 MSD) for the batch. If greater than 20 samples are to be extracted in a 24-hour shift, the samples must be separated into extraction batches of 20 or fewer samples.

**Field Duplicates**—Two samples collected at the same time and place under identical conditions, and treated identically throughout field and laboratory procedures. Results of analyses the field duplicates provide an estimate of the precision associated with sample collection, preservation, and storage, as well as with laboratory procedures.

**Field blank**—An aliquot of reagent water or other reference matrix that is placed in a sample container in the field, and treated as a sample in all respects, including exposure to sampling site conditions, storage, preservation, and all analytical procedures. The purpose of the field blank is to determine if the field or sample transporting procedures and environments have contaminated the sample. See also “Blank.”

**GC**—Gas chromatograph or gas chromatography.

**Gel-permeation chromatography (GPC)**—A form of liquid chromatography in which the analytes are separated based on exclusion from the solid phase by size.

**Internal standard**—A compound added to an extract or standard solution in a known amount and used as a reference for quantitation of the analytes of interest and surrogates. Also see Internal standard quantitation.

**Internal standard quantitation**—A means of determining the concentration of an analyte of interest (Tables 1 and 2) by reference to a compound not expected to be found in a sample.

**IDC**—Initial Demonstration of Capability (section 8.2); four aliquots of a reference matrix spiked with the analytes of interest and analyzed to establish the ability of the laboratory to generate acceptable precision and recovery. An IDC is performed prior to the first time this method is used and any time the method or instrumentation is modified.

**Laboratory Control Sample (LCS; laboratory fortified blank; section 8.4)**—An aliquot of reagent water spiked with known quantities of the analytes of interest and surrogates. The LCS is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery.

**Laboratory Fortified Sample Matrix**—See Matrix spike.

**Laboratory reagent blank**—See blank.

**Matrix spike (MS) and matrix spike duplicate (MSD) (laboratory fortified sample matrix and duplicate)**—Two aliquots of an environmental sample to which known quantities of the analytes of interest and surrogates are added in the laboratory. The MS/MSD are prepared and analyzed exactly like a field sample. Their purpose is to quantify any additional bias and imprecision caused by the sample matrix. The background concentrations of the analytes in the sample matrix must be determined in a separate aliquot and the measured values in the MS/MSD corrected for background concentrations.

**May**—This action, activity, or procedural step is neither required nor prohibited.

**May not**—This action, activity, or procedural step is prohibited.

**Method detection limit (MDL)**—A detection limit determined by the procedure at 40 CFR part 136, appendix B. The MDLs determined by EPA are listed in Tables 1 and 2. As noted in section 1.6, use the MDLs in Tables 1 and 2 in conjunction with current MDL data from the laboratory actually analyzing samples to assess the sensitivity of this procedure relative to project objectives

and regulatory requirements (where applicable).

**Minimum level (ML)**—The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level.”

**MS**—Mass spectrometer or mass spectrometry.

**Must**—This action, activity, or procedural step is required.

**Preparation blank**—See blank.

**Reagent water**—Water demonstrated to be free from the analytes of interest and potentially interfering substances at the MDLs for the analytes in this method.

**Regulatory compliance limit**—A limit on the concentration or amount of a pollutant or contaminant specified in a nationwide standard, in a permit, or otherwise established by a regulatory/control authority.

**Relative standard deviation (RSD)**—The standard deviation times 100 divided by the mean. Also termed “coefficient of variation.”

**RF**—Response factor. See section 7.6.2.

**RPD**—Relative percent difference.

**RSD**—See relative standard deviation.

**Safety Data Sheet (SDS)**—Written information on a chemical’s toxicity, health hazards, physical properties, fire, and reactivity, including storage, spill, and handling precautions that meet the requirements of OSHA, 29 CFR 1910.1200(g) and appendix D to § 1910.1200. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.

**Should**—This action, activity, or procedural step is suggested but not required.

**SPE**—Solid-phase extraction; a sample extraction or extract cleanup technique in which an analyte is selectively removed from a sample or extract by passage over or through a material capable of reversibly adsorbing the analyte.

**Stock solution**—A solution containing an analyte that is prepared using a reference material traceable to EPA, the National Institute of Science and Technology (NIST), or a source that will attest to the purity and authenticity of the reference material.

**Surrogate**—A compound unlikely to be found in a sample, which is spiked into the sample in a known amount before extraction, and which is quantified with the same procedures used to quantify other sample components. The purpose of the surrogate is to monitor method performance with each sample.

\* \* \* \* \*

*Method 611—Haloethers*

## 1. Scope and Application

1.1 This method covers the determination of certain haloethers. The following

parameters can be determined by this method:

Parameter	STORET No.	CAS No.
Bis(2-chloroethyl) ether .....	34273	111-44-4
Bis(2-chloroethoxy) methane .....	34278	111-91-1
2, 2'-oxybis (1-chloropropane) .....	34283	108-60-1
4-Bromophenyl phenyl ether .....	34636	101-55-3
4-Chlorophenyl phenyl ether .....	34641	7005-72-3

\* \* \* \* \*

*Method 624.1—Purgeables by GC/MS*

## 1. Scope and Application

1.1 This method is for determination of purgeable organic pollutants in industrial discharges and other environmental samples by gas chromatography combined with mass spectrometry (GC/MS), as provided under 40 CFR 136.1. This revision is based on previous protocols (References 1–3), on the revision promulgated October 26, 1984, and on an interlaboratory method validation study (Reference 4). Although this method was validated through an interlaboratory study conducted in the early 1980s, the fundamental chemistry principles used in this method remain sound and continue to apply.

1.2 The analytes that may be qualitatively and quantitatively determined using this method and their CAS Registry numbers are listed in Table 1. The method may be extended to determine the analytes listed in Table 2; however, poor purging efficiency or gas chromatography of some of these analytes may make quantitative determination difficult. For example, an elevated temperature may be required to purge some analytes from water. If an elevated temperature is used, calibration and all quality control (QC) tests must be performed at the elevated temperature. EPA encourages the use of this method to determine additional compounds amenable to purge-and-trap GC/MS.

1.3 The large number of analytes in Tables 1 and 2 of this method makes testing difficult if all analytes are determined simultaneously. Therefore, it is necessary to determine and perform QC tests for “analytes of interest” only. Analytes of interest are those required to be determined by a regulatory/control authority or in a permit, or by a client. If a list of analytes is not specified, the analytes in Table 1 must be determined, at a minimum, and QC testing must be performed for these analytes. The analytes in Table 1 and some of the analytes in Table 2 have been identified as Toxic Pollutants (40 CFR 401.15), expanded to a list of Priority Pollutants (40 CFR part 423, appendix A).

1.4 Method detection limits (MDLs; Reference 5) for the analytes in Table 1 are listed in that table. These MDLs were determined in reagent water (Reference 6). Advances in analytical technology, particularly the use of capillary (open-tubular) columns, allowed laboratories to routinely achieve MDLs for the analytes in

this method that are 2–10 times lower than those in the version promulgated in 1984. The MDL for a specific wastewater may differ from those listed, depending on the nature of interferences in the sample matrix.

1.4.1 EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described in section 13.2 are focused on such monitoring needs and may not be relevant to other uses of the method.

1.4.2 This method includes “reporting limits” based on EPA’s “minimum level” (ML) concept (see the glossary in section 20). Table 1 contains MDL values and ML values for many of the analytes. The MDL for an analyte in a specific wastewater may differ from that listed in Table 1, depending upon the nature of interferences in the sample matrix.

1.5 This method is performance-based. It may be modified to improve performance (e.g., to overcome interferences or improve the accuracy of results) provided all performance requirements are met.

1.5.1 Examples of allowed method modifications are described at 40 CFR 136.6. Other examples of allowed modifications specific to this method are described in section 8.1.2.

1.5.2 Any modification beyond those expressly allowed at 40 CFR 136.6 or in section 8.1.2 of this method shall be considered a major modification that is subject to application and approval of an alternate test procedure under 40 CFR 136.4 and 136.5.

1.5.3 For regulatory compliance, any modification must be demonstrated to produce results equivalent or superior to results produced by this method when applied to relevant wastewaters (section 8.3).

1.6 This method is restricted to use by or under the supervision of analysts experienced in the operation of a purge-and-trap system and a gas chromatograph/mass spectrometer and in the interpretation of mass spectra. Each analyst must demonstrate the ability to generate acceptable results with this method using the procedure in section 8.2.

1.7 Terms and units of measure used in this method are given in the glossary at the end of the method.

## 2. Summary of Method

2.1 A gas is bubbled through a measured volume of water in a specially-designed purging chamber. The purgeables are

efficiently transferred from the aqueous phase to the vapor phase. The vapor is swept through a sorbent trap where the purgeables are trapped. After purging is completed, the trap is heated and backflushed with the gas to desorb the purgeables onto a gas chromatographic column. The column is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

2.2 Different sample sizes in the range of 5–25 mL are allowed in order to meet differing sensitivity requirements. Calibration and QC samples must have the same volume as field samples.

## 3. Interferences

3.1 Impurities in the purge gas, organic compounds outgassing from the plumbing ahead of the trap, and solvent vapors in the laboratory account for the majority of contamination problems. The analytical system must be demonstrated to be free from contamination under the conditions of the analysis by analyzing blanks initially and with each analytical batch (samples analyzed on a given 12-hour shift, to a maximum of 20 samples), as described in Section 8.5. Fluoropolymer tubing, fittings, and thread sealant should be used to avoid contamination.

3.2 Samples can be contaminated by diffusion of volatile organics (particularly fluorocarbons and methylene chloride) through the septum seal into the sample during shipment and storage. Protect samples from sources of volatiles during collection, shipment, and storage. A reagent water field blank carried through sampling and analysis can serve as a check on such contamination.

3.3 Contamination by carry-over can occur whenever high level and low level samples are analyzed sequentially. To reduce the potential for carry-over, the purging device and sample syringe must be rinsed with reagent water between sample analyses. Whenever an unusually concentrated sample is encountered, it should be followed by an analysis of a blank to check for cross contamination. For samples containing large amounts of water-soluble materials, suspended solids, high boiling compounds or high purgeable levels, it may be necessary to wash the purging device with a detergent solution, rinse it with distilled water, and then dry it in a 105 °C oven between analyses. The trap and other parts of the system are also subject to contamination; therefore, frequent bakeout and purging of the entire system may be required. Screening samples at high dilution may prevent introduction of contaminants into the system.

#### 4. Safety

4.1 The toxicity or carcinogenicity of each reagent used in this method has not been precisely defined; however, each chemical compound should be treated as a potential health hazard. From this viewpoint, exposure to these chemicals must be reduced to the lowest possible level. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of safety data sheets (SDSs, OSHA, 29 CFR 1910.1200(g)) should also be made available to all personnel involved in sample handling and chemical analysis. Additional references to laboratory safety are available and have been identified (References 7–9) for the information of the analyst.

4.2. The following analytes covered by this method have been tentatively classified as known or suspected human or mammalian carcinogens: Benzene; carbon tetrachloride; chloroform; 1,4-dichlorobenzene; 1,2-dichloroethane; 1,2-dichloropropane; methylene chloride; tetrachloroethylene; trichloroethylene; and vinyl chloride. Primary standards of these toxic compounds should be prepared in a chemical fume hood, and a NIOSH/MESA approved toxic gas respirator should be worn when handling high concentrations of these compounds.

4.3 This method allows the use of hydrogen as a carrier gas in place of helium (Section 5.3.1.2). The laboratory should take the necessary precautions in dealing with hydrogen, and should limit hydrogen flow at the source to prevent buildup of an explosive mixture of hydrogen in air.

#### 5. Apparatus and Materials

**Note:** Brand names, suppliers, and part numbers are cited for illustration purposes only. No endorsement is implied. Equivalent performance may be achieved using equipment and materials other than those specified here. Demonstration of equivalent performance that meets the requirements of this method is the responsibility of the laboratory. Suppliers for equipment and materials in this method may be found through an on-line search.

5.1 Sampling equipment for discrete sampling.

5.1.1 Vial—25- or 40-mL capacity, or larger, with screw cap with a hole in the center (Fisher #13075 or equivalent). Unless pre-cleaned, detergent wash, rinse with tap and reagent water, and dry at 105 ± 5 °C before use.

5.1.2 Septum—Fluoropolymer-faced silicone (Fisher #12722 or equivalent). Unless pre-cleaned, detergent wash, rinse with tap and reagent water, and dry at 105 ± 5 °C for one hour before use.

5.2 Purge-and-trap system—The purge-and-trap system consists of three separate pieces of equipment: A purging device, trap, and desorber. Several complete systems are commercially available with autosamplers. Any system that meets the performance requirements in this method may be used.

5.2.1 The purging device should accept 5- to 25-mL samples with a water column at least 3 cm deep. The purge gas must pass through the water column as finely divided

bubbles. The purge gas must be introduced no more than 5 mm from the base of the water column. Purge devices of a different volume may be used so long as the performance requirements in this method are met.

5.2.2 The trap should be at least 25 cm long and have an inside diameter of at least 0.105 in. The trap should be packed to contain the following minimum lengths of adsorbents: 1.0 cm of methyl silicone coated packing (section 6.3.2), 15 cm of 2,6-diphenylene oxide polymer (section 6.3.1), and 8 cm of silica gel (section 6.3.3). A trap with different dimensions and packing materials is acceptable so long as the performance requirements in this method are met.

5.2.3 The desorber should be capable of rapidly heating the trap to the temperature necessary to desorb the analytes of interest, and of maintaining this temperature during desorption. The trap should not be heated higher than the maximum temperature recommended by the manufacturer.

5.2.4 The purge-and-trap system may be assembled as a separate unit or coupled to a gas chromatograph.

5.3 GC/MS system.

5.3.1 Gas chromatograph (GC)—An analytical system complete with a temperature programmable gas chromatograph and all required accessories, including syringes and analytical columns. Autosamplers designed for purge-and-trap analysis of volatiles also may be used.

5.3.1.1 Injection port—Volatiles interface, split, splitless, temperature programmable split/splitless (PTV), large volume, on-column, backflushed, or other.

5.3.1.2 Carrier gas—Data in the tables in this method were obtained using helium carrier gas. If another carrier gas is used, analytical conditions may need to be adjusted for optimum performance, and calibration and all QC tests must be performed with the alternative carrier gas. See Section 4.3 for precautions regarding the use of hydrogen as a carrier gas.

5.3.2 GC column—See the footnote to Table 3. Other columns or column systems may be used provided all requirements in this method are met.

5.3.3 Mass spectrometer—Capable of repetitively scanning from 35–260 Daltons (amu) every 2 seconds or less, utilizing a 70 eV (nominal) electron energy in the electron impact ionization mode, and producing a mass spectrum which meets all criteria in Table 4 when 50 ng or less of 4-bromofluorobenzene (BFB) is injected through the GC inlet. If acrolein, acrylonitrile, chloromethane, and vinyl chloride are to be determined, it may be necessary to scan from below 25 Daltons to measure the peaks in the 26–35 Dalton range for reliable identification.

5.3.4 GC/MS interface—Any GC to MS interface that meets all performance requirements in this method may be used.

5.3.5 Data system—A computer system must be interfaced to the mass spectrometer that allows continuous acquisition and storage of mass spectra throughout the chromatographic program. The computer must have software that allows searching any

GC/MS data file for specific m/z's (masses) and plotting m/z abundances versus time or scan number. This type of plot is defined as an extracted ion current profile (EICP). Software must also be available that allows integrating the abundance at any EICP between specified time or scan number limits.

5.4 Syringes—Graduated, 5–25 mL, glass hypodermic with Luerlok tip, compatible with the purging device.

5.5 Micro syringes—Graduated, 25–1000 µL, with 0.006 in. ID needle.

5.6 Syringe valve—Two-way, with Luer ends.

5.7 Syringe—5 mL, gas-tight with shut-off valve.

5.8 Bottle—15 mL, screw-cap, with Teflon cap liner.

5.9 Balance—Analytical, capable of accurately weighing 0.0001 g.

#### 6. Reagents

6.1 Reagent water—Reagent water is defined as water in which the analytes of interest and interfering compounds are not detected at the MDLs of the analytes of interest. It may be generated by passing deionized water, distilled water, or tap water through a carbon bed, passing the water through a water purifier, or heating the water to between 90 and 100 °C while bubbling contaminant-free gas through it for approximately 1 hour. While still hot, transfer the water to screw-cap bottles and seal with a fluoropolymer-lined cap.

6.2 Sodium thiosulfate—(ACS) Granular.

6.3 Trap materials.

6.3.1 2,6-Diphenylene oxide polymer—Tenax, 60/80 mesh, chromatographic grade, or equivalent.

6.3.2 Methyl silicone packing—3% OV–1 on Chromosorb-W, 60/80 mesh, or equivalent.

6.3.3 Silica gel—35/60 mesh, Davison, Grade-15 or equivalent.

6.3.4 Other trap materials are acceptable if performance requirements in this method are met.

6.4 Methanol—Demonstrated to be free from the target analytes and potentially interfering compounds.

6.5 Stock standard solutions—Stock standard solutions may be prepared from pure materials, or purchased as certified solutions. Traceability must be to the National Institute of Standards and Technology (NIST) or other national or international standard, when available. Stock solution concentrations alternative to those below may be used. Prepare stock standard solutions in methanol using assayed liquids or gases as appropriate. Because some of the compounds in this method are known to be toxic, primary dilutions should be prepared in a hood, and a NIOSH/MESA approved toxic gas respirator should be worn when high concentrations of neat materials are handled. The following procedure may be used to prepare standards from neat materials:

6.5.1 Place about 9.8 mL of methanol in a 10-mL ground-glass-stoppered volumetric flask. Allow the flask to stand, unstoppered, for about 10 minutes or until all alcohol wetted surfaces have dried. Weigh the flask to the nearest 0.1 mg.

6.5.2 Add the assayed reference material.

6.5.2.1 Liquids—Using a 100  $\mu\text{L}$  syringe, immediately add two or more drops of assayed reference material to the flask. Be sure that the drops fall directly into the alcohol without contacting the neck of the flask. Reweigh, dilute to volume, stopper, then mix by inverting the flask several times. Calculate the concentration in  $\mu\text{g}/\mu\text{L}$  from the net gain in weight.

6.5.2.2 Gases—To prepare standards for any of compounds that boil below 30  $^{\circ}\text{C}$ , fill a 5-mL valved gas-tight syringe with reference standard vapor to the 5.0 mL mark. Lower the needle to 5 mm above the methanol meniscus. Slowly introduce the vapor above the surface of the liquid (the vapor will rapidly dissolve in the methanol). Reweigh, dilute to volume, stopper, then mix by inverting the flask several times. Calculate the concentration in  $\mu\text{g}/\mu\text{L}$  from the net gain in weight.

6.5.3 When compound purity is assayed to be 96% or greater, the weight may be used without correction to calculate the concentration of the stock standard. Commercially prepared stock standards may be used at any concentration if they are certified by the manufacturer or by an independent source.

6.5.4 Prepare fresh standards weekly for the gases and 2-chloroethylvinyl ether. Unless stated otherwise in this method, store non-aqueous standards in fluoropolymer-lined screw-cap, or heat-sealed, glass containers, in the dark at  $-20$  to  $-10$   $^{\circ}\text{C}$ . Store aqueous standards; e.g., the aqueous LCS (section 8.4.1) in the dark at  $\leq 6$   $^{\circ}\text{C}$  (but do not freeze) with zero headspace; e.g., in VOA vials (section 5.1.1). Standards prepared by the laboratory may be stored for up to one month, except when comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data on file to prove stability for a longer period. Commercially prepared standards may be stored until the expiration date provided by the vendor, except when comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data from the vendor on file to prove stability for a longer period.

**Note:** 2-Chloroethylvinyl ether has been shown to be stable for as long as one month if prepared as a separate standard, and the other analytes have been shown to be stable for as long as 2 months if stored at less than  $-10$   $^{\circ}\text{C}$  with minimal headspace in sealed, miniature inert-valved vials.

6.6 Secondary dilution standards—Using stock solutions, prepare secondary dilution standards in methanol that contain the compounds of interest, either singly or mixed. Secondary dilution standards should be prepared at concentrations such that the aqueous calibration standards prepared in section 7.3.2 will bracket the working range of the analytical system.

6.7 Surrogate standard spiking solution—Select a minimum of three surrogate compounds from Table 5. The surrogates selected should match the purging characteristics of the analytes of interest as

closely as possible. Prepare a stock standard solution for each surrogate in methanol as described in section 6.5, and prepare a solution for spiking the surrogates into all blanks, LCSs, and MS/MSDs. Prepare the spiking solution such that spiking a small volume will result in a constant concentration of the surrogates. For example, add 10  $\mu\text{L}$  of a spiking solution containing the surrogates at a concentration of 15  $\mu\text{g}/\text{mL}$  in methanol to a 5-mL aliquot of water to produce a concentration of 30  $\mu\text{g}/\text{L}$  for each surrogate. Other surrogate concentrations may be used. Store per section 6.5.4.

6.8 BFB standard—Prepare a solution of BFB in methanol as described in Sections 6.5 and 6.6. The solution should be prepared such that an injection or purging from water will result in introduction of  $\leq 50$  ng into the GC. BFB may be included in a mixture with the internal standards and/or surrogates.

6.9 Quality control check sample concentrate—See Section 8.2.1.

## 7. Calibration

7.1 Assemble a purge-and-trap system that meets the specifications in Section 5.2. Prior to first use, condition the trap overnight at 180  $^{\circ}\text{C}$  by backflushing with gas at a flow rate of at least 20 mL/min. Condition the trap after each analysis at a temperature and time sufficient to prevent detectable concentrations of the analytes or contaminants in successive analyses.

7.2 Connect the purge-and-trap system to the gas chromatograph. The gas chromatograph should be operated using temperature and flow rate conditions equivalent to those given in the footnotes to Table 3. Alternative temperature and flow rate conditions may be used provided that performance requirements in this method are met.

7.3 Internal standard calibration.

7.3.1 Internal standards.

7.3.1.1 Select three or more internal standards similar in chromatographic behavior to the compounds of interest. Suggested internal standards are listed in Table 5. Use the base peak  $m/z$  as the primary  $m/z$  for quantification of the standards. If interferences are found at the base peak, use one of the next two most intense  $m/z$ 's for quantitation. Demonstrate that measurements of the internal standards are not affected by method or matrix interferences.

7.3.1.2 To assure accurate analyte identification, particularly when selected ion monitoring (SIM) is used, it may be advantageous to include more internal standards than those suggested in Section 7.3.1.1. An analyte will be located most accurately if its retention time relative to an internal standard is in the range of 0.8 to 1.2.

7.3.1.3 Prepare a stock standard solution for each internal standard in methanol as described in Section 6.5, and prepare a solution for spiking the internal standards into all blanks, LCSs, and MS/MSDs. Prepare the spiking solution such that spiking a small volume will result in a constant

concentration of the internal standards. For example, add 10  $\mu\text{L}$  of a spiking solution containing the internal standards at a concentration of 15  $\mu\text{g}/\text{mL}$  in methanol to a 5-mL aliquot of water to produce a

concentration of 30  $\mu\text{g}/\text{L}$  for each internal standard. Other concentrations may be used. The internal standard solution and the surrogate standard spiking solution (Section 6.7) may be combined, if desired. Store per section 6.5.4.

7.3.2 Calibration.

7.3.2.1 Calibration standards.

7.3.2.1.1 Prepare calibration standards at a minimum of five concentration levels for each analyte of interest by adding appropriate volumes of one or more stock standards to a fixed volume (e.g., 40 mL) of reagent water in volumetric glassware. Fewer levels may be necessary for some analytes based on the sensitivity of the MS, but no fewer than 3 levels may be used, and only the highest or lowest point(s) may be dropped from the calibration. One of the calibration standards should be at a concentration at or below the ML or as specified by a regulatory/control authority or in a permit. The ML value may be rounded to a whole number that is more convenient for preparing the standard, but must not exceed the ML values listed in Table 1 for those analytes which list ML values. Alternatively, the laboratory may establish the ML for each analyte based on the concentration of the lowest calibration standard in a series of standards produced in the laboratory or obtained from a commercial vendor, again, provided that the ML value does not exceed the MLs in Table 1, and provided that the resulting calibration meets the acceptance criteria in Section 7.3.4, based on the RSD, RSE, or  $R^2$ . The concentrations of the higher standards should correspond to the expected range of concentrations found in real samples, or should define the working range of the GC/MS system for full-scan and/or SIM operation, as appropriate. A minimum of six concentration levels is required for a second order, non-linear (e.g., quadratic;  $ax^2 + bx + c = 0$ ) calibration. Calibrations higher than second order are not allowed.

7.3.2.1.2 To each calibration standard or standard mixture, add a known constant volume of the internal standard spiking solution (section 7.3.1.3) and surrogate standard spiking solution (section 6.7) or the combined internal standard solution and surrogate spiking solution (section 7.3.1.3). Aqueous standards may be stored up to 24 hours, if held in sealed vials with zero headspace. If not so stored, they must be discarded after one hour.

7.3.2.2 Prior to analysis of the calibration standards, analyze the BFB standard (section 6.8) and adjust the scan rate of the MS to produce a minimum of 5 mass spectra across the BFB GC peak, but do not exceed 2 seconds per scan. Adjust instrument conditions until the BFB criteria in Table 4 are met. Once the scan conditions are established, they must be used for analyses of all standards, blanks, and samples.

**Note:** The BFB spectrum may be evaluated by summing the intensities of the  $m/z$ 's across the GC peak, subtracting the background at each  $m/z$  in a region of the chromatogram within 20 scans of but not including any part of the BFB peak. The BFB spectrum may also be evaluated by fitting a Gaussian to each  $m/z$  and using the intensity

at the maximum for each Gaussian, or by integrating the area at each m/z and using the integrated areas. Other means may be used for evaluation of the BFB spectrum so long as the spectrum is not distorted to meet the criteria in Table 4.

7.3.2.3 Analyze the mid-point standard and enter or review the retention time, relative retention time, mass spectrum, and quantitation m/z in the data system for each analyte of interest, surrogate, and internal standard. If additional analytes (Table 2) are to be quantified, include these analytes in the standard. The mass spectrum for each analyte must be comprised of a minimum of 2 m/z's; 3 to 5 m/z's assure more reliable analyte identification. Suggested quantitation m/z's are shown in Table 6 as the primary m/z. For analytes in Table 6 that do not have a secondary m/z, acquire a mass spectrum and enter one or more secondary m/z's for more reliable identification. If an interference

occurs at the primary m/z, use one of the secondary m/z's or an alternative m/z. A single m/z only is required for quantitation.

7.3.2.4 For SIM operation, determine the analytes in each descriptor, the quantitation m/z for each analyte (the quantitation m/z can be the same as for full-scan operation; Section 7.3.2.3), the dwell time on each m/z for each analyte, and the beginning and ending retention time for each descriptor. Analyze the verification standard in scan mode to verify m/z's and establish retention times for the analytes. There must be a minimum of two m/z's for each analyte to assure analyte identification. To maintain sensitivity, the number of m/z's in a descriptor should be limited. For example, for a descriptor with 10 m/z's and a chromatographic peak width of 5 sec, a dwell time of 100 ms at each m/z would result in a scan time of 1 second and provide 5 scans across the GC peak. The quantitation m/z will usually be the most intense peak in the

mass spectrum. The quantitation m/z and dwell time may be optimized for each analyte. The acquisition table used for SIM must take into account the mass defect (usually less than 0.2 Dalton) that can occur at each m/z monitored. Refer to the footnotes to Table 3 for establishing operating conditions and to section 7.3.2.2 for establishing scan conditions.

7.3.2.5 For combined scan and SIM operation, set up the scan segments and descriptors to meet requirements in sections 7.3.2.2–7.3.2.4. Analyze unfamiliar samples in the scan mode to assure that the analytes of interest are determined.

7.3.3 Analyze each calibration standard according to Section 10 and tabulate the area at the quantitation m/z against concentration for each analyte of interest, surrogate, and internal standard. Calculate the response factor (RF) for each compound at each concentration using Equation 1.

$$RF = \frac{(A_s \times C_{is})}{(A_{is} \times C_s)} \quad \text{Equation 1}$$

Where:

$A_s$  = Area of the characteristic m/z for the analyte to be measured.

$A_{is}$  = Area of the characteristic m/z for the internal standard.

$C_{is}$  = Concentration of the internal standard ( $\mu\text{g/L}$ ).

$C_s$  = Concentration of the analyte to be measured ( $\mu\text{g/L}$ ).

7.3.4 Calculate the mean (average) and relative standard deviation (RSD) of the response factors. If the RSD is less than 35%, the RF can be assumed to be invariant and the average RF can be used for calculations. Alternatively, the results can be used to fit a linear or quadratic regression of response ratios,  $A_s/A_{is}$ , vs. concentration ratios  $C_s/C_{is}$ . If used, the regression must be weighted inversely proportional to concentration (1/C). The coefficient of determination ( $R^2$ ) of the weighted regression must be greater than 0.920 (this value roughly corresponds to the RSD limit of 35%). Alternatively, the relative standard error (Reference 10) may be used as an acceptance criterion. As with the RSD, the RSE must be less than 35%. If an RSE less than 35% cannot be achieved for a quadratic regression, system performance is unacceptable, and the system must be adjusted and re-calibrated.

**Note:** Using capillary columns and current instrumentation, it is quite likely that a laboratory can calibrate the target analytes in this method and achieve a linearity metric (either RSD or RSE) well below 35%. Therefore, laboratories are permitted to use more stringent acceptance criteria for calibration than described here, for example, to harmonize their application of this method with those from other sources.

7.4 Calibration verification—Because the analytical system is calibrated by purge of the analytes from water, calibration verification is performed using the laboratory control sample (LCS). See section 8.4 for requirements for calibration verification

using the LCS, and the Glossary for further definition.

#### 8. Quality Control

8.1 Each laboratory that uses this method is required to operate a formal quality assurance program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and ongoing analysis of spiked samples and blanks to evaluate and document data quality (40 CFR 136.7). The laboratory must maintain records to document the quality of data generated. Results of ongoing performance tests are compared with established QC acceptance criteria to determine if the results of analyses meet performance requirements of this method. When results of spiked samples do not meet the QC acceptance criteria in this method, a quality control check sample (laboratory control sample; LCS) must be analyzed to confirm that the measurements were performed in an in-control mode of operation. A laboratory may develop its own performance criteria (as QC acceptance criteria), provided such criteria are as or more restrictive than the criteria in this method.

8.1.1 The laboratory must make an initial demonstration of capability (DOC) to generate acceptable precision and recovery with this method. This demonstration is detailed in Section 8.2. On a continuing basis, the laboratory must repeat demonstration of capability (DOC) at least annually.

8.1.2 In recognition of advances that are occurring in analytical technology, and to overcome matrix interferences, the laboratory is permitted certain options (section 1.5 and 40 CFR 136.6(b)) to improve separations or lower the costs of measurements. These options may include an alternative purge-and-trap device, and changes in both column and type of mass spectrometer (see 40 CFR 136.6(b)(4)(xvi)). Alternative determinative techniques, such as substitution of

spectroscopic or immunoassay techniques, and changes that degrade method performance, are not allowed. If an analytical technique other than GC/MS is used, that technique must have a specificity equal to or greater than the specificity of GC/MS for the analytes of interest. The laboratory is also encouraged to participate in inter-comparison and performance evaluation studies (see section 8.8).

8.1.2.1 Each time a modification is made to this method, the laboratory is required to repeat the procedure in section 8.2. If the detection limit of the method will be affected by the change, the laboratory must demonstrate that the MDLs (40 CFR part 136, appendix B) are lower than one-third the regulatory compliance limit or the MDLs in this method, whichever are greater. If calibration will be affected by the change, the instrument must be recalibrated per section 7. Once the modification is demonstrated to produce results equivalent or superior to results produced by this method, that modification may be used routinely thereafter, so long as the other requirements in this method are met (e.g., matrix spike/matrix spike duplicate recovery and relative percent difference).

8.1.2.1.1 If a modification is to be applied to a specific discharge, the laboratory must prepare and analyze matrix spike/matrix spike duplicate (MS/MSD) samples (Section 8.3) and LCS samples (section 8.4). The laboratory must include internal standards and surrogates (section 8.7) in each of the samples. The MS/MSD and LCS samples must be fortified with the analytes of interest (section 1.3.). If the modification is for nationwide use, MS/MSD samples must be prepared from a minimum of nine different discharges (See section 8.1.2.1.2), and all QC acceptance criteria in this method must be met. This evaluation only needs to be performed once, other than for the routine QC required by this method (for example it

could be performed by the vendor of the alternative materials) but any laboratory using that specific material must have the results of the study available. This includes a full data package with the raw data that will allow an independent reviewer to verify each determination and calculation performed by the laboratory (see section 8.1.2.2.5, items (a)–(l)).

8.1.2.1.2 Sample matrices on which MS/MSD tests must be performed for nationwide use of an allowed modification:

(a) Effluent from a publicly owned treatment works (POTW).

(b) ASTM D5905 Standard Specification for Substitute Wastewater.

(c) Sewage sludge, if sewage sludge will be in the permit.

(d) ASTM D1141 Standard Specification for Substitute Ocean Water, if ocean water will be in the permit.

(e) Untreated and treated wastewaters up to a total of nine matrix types (see <https://www.epa.gov/eg/industrial-effluent-guidelines> for a list of industrial categories with existing effluent guidelines).

(i) At least one of the above wastewater matrix types must have at least one of the following characteristics:

(A) Total suspended solids greater than 40 mg/L.

(B) Total dissolved solids greater than 100 mg/L.

(C) Oil and grease greater than 20 mg/L.

(D) NaCl greater than 120 mg/L.

(E) CaCO<sub>3</sub> greater than 140 mg/L.

(ii) Results of MS/MSD tests must meet QC acceptance criteria in section 8.3.

(f) A proficiency testing (PT) sample from a recognized provider, in addition to tests of the nine matrices (section 8.1.2.1.1).

8.1.2.2 The laboratory is required to maintain records of modifications made to this method. These records include the following, at a minimum:

8.1.2.2.1 The names, titles, and business street addresses, telephone numbers, and email addresses of the analyst(s) that performed the analyses and modification, and of the quality control officer that witnessed and will verify the analyses and modifications.

8.1.2.2.2 A list of analytes, by name and CAS Registry Number.

8.1.2.2.3 A narrative stating reason(s) for the modifications.

8.1.2.2.4 Results from all quality control (QC) tests comparing the modified method to this method, including:

(a) Calibration (section 7).

(b) Calibration verification/LCS (section 8.4).

(c) Initial demonstration of capability (section 8.2).

(d) Analysis of blanks (section 8.5).

(e) Matrix spike/matrix spike duplicate analysis (section 8.3).

(f) Laboratory control sample analysis (section 8.4).

8.1.2.2.5 Data that will allow an independent reviewer to validate each determination by tracing the instrument output (peak height, area, or other signal) to the final result. These data are to include:

(a) Sample numbers and other identifiers.

(b) Analysis dates and times.

(c) Analysis sequence/run chronology.

(d) Sample volume (Section 10).

(e) Sample dilution (Section 13.2).

(f) Instrument and operating conditions.

(g) Column (dimensions, material, etc.).

(h) Operating conditions (temperature program, flow rate, etc.).

(i) Detector (type, operating conditions, etc.).

(j) Chromatograms, mass spectra, and other recordings of raw data.

(k) Quantitation reports, data system outputs, and other data to link the raw data to the results reported.

(l) A written Standard Operating Procedure (SOP).

8.1.2.2.6 Each individual laboratory wishing to use a given modification must perform the start-up tests in section 8.1.2 (e.g., DOC, MDL), with the modification as an integral part of this method prior to applying the modification to specific discharges. Results of the DOC must meet the QC acceptance criteria in Table 7 for the analytes of interest (section 1.3), and the MDLs must be equal to or lower than the MDLs in Table 3 for the analytes of interest.

8.1.3 Before analyzing samples, the laboratory must analyze a blank to demonstrate that interferences from the analytical system, labware, and reagents are under control. Each time a batch of samples is analyzed or reagents are changed, a blank must be analyzed as a safeguard against laboratory contamination. Requirements for the blank are given in section 8.5.

8.1.4 The laboratory must, on an ongoing basis, spike and analyze samples to monitor and evaluate method and laboratory performance on the sample matrix. The procedure for spiking and analysis is given in section 8.3.

8.1.5 The laboratory must, on an ongoing basis, demonstrate through analysis of a quality control check sample (laboratory control sample, LCS; on-going precision and recovery sample, OPR) that the measurement system is in control. This procedure is given in section 8.4.

8.1.6 The laboratory must maintain performance records to document the quality of data that is generated. This procedure is given in section 8.8.

8.1.7 The large number of analytes tested in performance tests in this method present a substantial probability that one or more will fail acceptance criteria when many analytes are tested simultaneously, and a re-test is allowed if this situation should occur. If, however, continued re-testing results in further repeated failures, the laboratory must document and report the failures (e.g., as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority. Results associated with a QC failure for an analyte regulated in a discharge cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results.

8.2 Initial demonstration of capability (DOC)—To establish the ability to generate acceptable recovery and precision, the laboratory must perform the DOC in sections 8.2.1 through 8.2.6 for the analytes of interest. The laboratory must also establish

MDLs for the analytes of interest using the MDL procedure at 40 CFR part 136, appendix B. The laboratory's MDLs must be equal to or lower than those listed in Table 1 for those analytes which list MDL values, or lower than one-third the regulatory compliance limit, whichever is greater. For MDLs not listed in Table 1, the laboratory must determine the MDLs using the MDL procedure at 40 CFR part 136, appendix B under the same conditions used to determine the MDLs for the analytes listed in Table 1. All procedures used in the analysis must be included in the DOC.

8.2.1 For the DOC, a QC check sample concentrate (LCS concentrate) containing each analyte of interest (section 1.3) is prepared in methanol. The QC check sample concentrate must be prepared independently from those used for calibration, but may be from the same source as the second-source standard used for calibration verification/LCS (sections 7.4 and 8.4). The concentrate should produce concentrations of the analytes of interest in water at the mid-point of the calibration range, and may be at the same concentration as the LCS (section 8.4).

**Note:** QC check sample concentrates are no longer available from EPA.

8.2.2 Using a pipet or micro-syringe, prepare four LCSs by adding an appropriate volume of the concentrate to each of four aliquots of reagent water. The volume of reagent water must be the same as the volume that will be used for the sample, blank (section 8.5), and MS/MSD (section 8.3). A volume of 5 mL and a concentration of 20 µg/L were used to develop the QC acceptance criteria in Table 7. An alternative volume and sample concentration may be used, provided that all QC tests are performed and all QC acceptance criteria in this method are met. Also add an aliquot of the surrogate spiking solution (section 6.7) and internal standard spiking solution (section 7.3.1.3) to the reagent-water aliquots.

8.2.3 Analyze the four LCSs according to the method beginning in section 10.

8.2.4 Calculate the average percent recovery ( $\bar{X}$ ) and the standard deviation of the percent recovery (s) for each analyte using the four results.

8.2.5 For each analyte, compare s and  $\bar{X}$  with the corresponding acceptance criteria for precision and recovery in Table 7. For analytes in Tables 1 and 2 not listed in Table 7, DOC QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 11 and 12). Alternatively, acceptance criteria for analytes not listed in Table 7 may be based on laboratory control charts. If s and  $\bar{X}$  for all analytes of interest meet the acceptance criteria, system performance is acceptable and analysis of blanks and samples may begin. If any individual s exceeds the precision limit or any individual  $\bar{X}$  falls outside the range for recovery, system performance is unacceptable for that analyte.

**Note:** The large number of analytes in Tables 1 and 2 present a substantial probability that one or more will fail at least one of the acceptance criteria when many or all analytes are determined simultaneously. Therefore, the analyst is permitted to conduct a "re-test" as described in section 8.2.6.

8.2.6 When one or more of the analytes tested fail at least one of the acceptance criteria, repeat the test for only the analytes that failed. If results for these analytes pass, system performance is acceptable and analysis of samples and blanks may proceed. If one or more of the analytes again fail, system performance is unacceptable for the analytes that failed the acceptance criteria. Correct the problem and repeat the test (section 8.2). See section 8.1.7 for disposition of repeated failures.

**Note:** To maintain the validity of the test and re-test, system maintenance and/or adjustment is not permitted between this pair of tests.

8.3 Matrix spike and matrix spike duplicate (MS/MSD)—The purpose of the MS/MSD requirement is to provide data that demonstrate the effectiveness of the method as applied to the samples in question by a given laboratory, and both the data user (discharger, permittee, regulated entity, regulatory/control authority, customer, other) and the laboratory share responsibility for provision of such data. The data user should identify the sample and the analytes of interest (section 1.3) to be spiked and provide sufficient sample volume to perform MS/MSD analyses. The laboratory must, on an ongoing basis, spike at least 5% of the samples in duplicate from each discharge being monitored to assess accuracy (recovery and precision). If direction cannot be obtained from the data user, the laboratory must spike at least one sample in duplicate per extraction batch of up to 20 samples with the analytes in Table 1. Spiked sample results should be reported only to the data user whose sample was spiked, or as requested or required by a regulatory/control authority, or in a permit.

8.3.1 If, as in compliance monitoring, the concentration of a specific analyte will be checked against a regulatory concentration limit, the concentration of the spike should be at that limit; otherwise, the concentration of the spike should be one to five times higher than the background concentration determined in section 8.3.2, at or near the mid-point of the calibration range, or at the concentration in the LCS (section 8.4) whichever concentration would be larger.

8.3.2 Analyze one sample aliquot to determine the background concentration (B) of the each analyte of interest. If necessary, prepare a new check sample concentrate (section 8.2.1) appropriate for the background concentration. Spike and analyze two additional sample aliquots, and determine the concentration after spiking ( $A_1$  and  $A_2$ ) of each analyte. Calculate the percent recoveries ( $P_1$  and  $P_2$ ) as  $100(A_1 - B)/T$  and  $100(A_2 - B)/T$ , where T is the known true value of the spike. Also calculate the relative percent difference (RPD) between the concentrations ( $A_1$  and  $A_2$ ) as  $200\sqrt{A_1 - A_2}/(A_1 + A_2)$ . If necessary, adjust the concentrations used to calculate the RPD to account for differences in the volumes of the spiked aliquots.

8.3.3 Compare the percent recoveries ( $P_1$  and  $P_2$ ) and the RPD for each analyte in the MS/MSD aliquots with the corresponding QC acceptance criteria in Table 7. A laboratory may develop and apply QC acceptance

criteria more restrictive than the criteria in Table 7, if desired.

8.3.3.1 If any individual P falls outside the designated range for recovery in either aliquot, or the RPD limit is exceeded, the result for the analyte in the unspiked sample is suspect. See Section 8.1.7 for disposition of failures.

8.3.3.2 The acceptance criteria in Table 7 were calculated to include an allowance for error in measurement of both the background and spike concentrations, assuming a spike to background ratio of 5:1. This error will be accounted for to the extent that the spike to background ratio approaches 5:1 (Reference 13) and is applied to spike concentrations of 20  $\mu\text{g/L}$  and higher. If spiking is performed at a concentration lower than 20  $\mu\text{g/L}$ , the laboratory must use the QC acceptance criteria in Table 7, the optional QC acceptance criteria calculated for the specific spike concentration in Table 8, or optional in-house criteria (Section 8.3.4). To use the acceptance criteria in Table 8: (1) Calculate recovery ( $X'$ ) using the equation in Table 8, substituting the spike concentration (T) for C; (2) Calculate overall precision ( $S'$ ) using the equation in Table 8, substituting  $X'$  for  $\bar{X}$ ; (3) Calculate the range for recovery at the spike concentration as  $(100 X'/T) \pm 2.44(100 S'/T)\%$  (Reference 4). For analytes of interest in Tables 1 and 2 not listed in Table 7, QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 11 and 12). Alternatively, acceptance criteria may be based on laboratory control charts. In-house LCS QC acceptance criteria must be updated at least every two years.

8.3.4 After analysis of a minimum of 20 MS/MSD samples for each target analyte and surrogate, and if the laboratory chooses to develop and apply in-house QC limits, the laboratory should calculate and apply in-house QC limits for recovery and RPD of future MS/MSD samples (section 8.3). The QC limits for recovery are calculated as the mean observed recovery  $\pm 3$  standard deviations, and the upper QC limit for RPD is calculated as the mean RPD plus 3 standard deviations of the RPDs. The in-house QC limits must be updated at least every two years and re-established after any major change in the analytical instrumentation or process. If in-house QC limits are developed, at least 80% of the analytes tested in the MS/MSD must have in-house QC acceptance criteria that are tighter than those in Table 7 and the remaining analytes (those other than the analytes included in the 80%) must meet the acceptance criteria in Table 7. If an in-house QC limit for the RPD is greater than the limit in Table 7, then the limit in Table 7 must be used. Similarly, if an in-house lower limit for recovery is below the lower limit in Table 7, then the lower limit in Table 7 must be used, and if an in-house upper limit for recovery is above the upper limit in Table 7, then the upper limit in Table 7 must be used.

8.4 Calibration verification/laboratory control sample (LCS)—The working calibration curve or RF must be verified immediately after calibration and at the beginning of each 12-hour shift by the

measurement of an LCS. The LCS must be from a source different from the source used for calibration (section 7.3.2.1), but may be the same as the sample prepared for the DOC (section 8.2.1).

**Note:** The 12-hour shift begins after analysis of BFB, the LCS, and the blank, and ends 12 hours later. BFB, the LCS, and blank are outside of the 12-hour shift (Section 11.4). The MS and MSD are treated as samples and are analyzed within the 12-hour shift.

8.4.1 Prepare the LCS by adding QC check sample concentrate (section 8.2.1) to reagent water. Include all analytes of interest (Section 1.3) in the LCS. The volume of reagent water must be the same as the volume used for the sample, blank (Section 8.5), and MS/MSD (section 8.3). Also add an aliquot of the surrogate solution (Section 6.7) and internal standard solution (section 7.3.1.3). The concentration of the analytes in reagent water should be the same as the concentration in the DOC (section 8.2.2).

8.4.2 Analyze the LCS prior to analysis of field samples in the batch of samples analyzed during the 12-hour shift (see the **Note** at section 8.4). Determine the concentration (A) of each analyte. Calculate the percent recovery (Q) as  $100(A/T)\%$ , where T is the true value of the concentration in the LCS.

8.4.3 Compare the percent recovery (Q) for each analyte with its corresponding QC acceptance criterion in Table 7. For analytes of interest in Tables 1 and 2 not listed in Table 7, use the QC acceptance criteria developed for the LCS (section 8.4.5). If the recoveries for all analytes of interest fall within their respective QC acceptance criteria, analysis of blanks and field samples may proceed. If any individual Q falls outside the range, proceed according to section 8.4.4.

**Note:** The large number of analytes in Tables 1—2 present a substantial probability that one or more will fail the acceptance criteria when all analytes are tested simultaneously. Because a re-test is allowed in event of failure (sections 8.1.7 and 8.4.3), it may be prudent to analyze two LCSs together and evaluate results of the second analysis against the QC acceptance criteria only if an analyte fails the first test.

8.4.4 Repeat the test only for those analytes that failed to meet the acceptance criteria (Q). If these analytes now pass, system performance is acceptable and analysis of blanks and samples may proceed. Repeated failure, however, will confirm a general problem with the measurement system. If this occurs, repeat the test (section 8.4.2), using a fresh LCS (section 8.2.2) or an LCS prepared with a fresh QC check sample concentrate (section 8.2.1), or perform and document system repair. Subsequent to repair, repeat the calibration verification/LCS test (section 8.4). If the acceptance criteria for Q cannot be met, re-calibrate the instrument (section 7). See section 8.1.7 for disposition of repeated failures.

**Note:** To maintain the validity of the test and re-test, system maintenance and/or adjustment is not permitted between the pair of tests.

8.4.5 After analysis of 20 LCS samples, and if the laboratory chooses to develop and apply in-house QC limits, the laboratory should calculate and apply in-house QC limits for recovery to future LCS samples (section 8.4). Limits for recovery in the LCS calculated as the mean recovery  $\pm 3$  standard deviations. A minimum of 80% of the analytes tested for in the LCS must have QC acceptance criteria tighter than those in Table 7, and the remaining analytes (those other than the analytes included in the 80%) must meet the acceptance criteria in Table 7. If an in-house lower limit for recovery is lower than the lower limit in Table 7, the lower limit in Table 7 must be used, and if an in-house upper limit for recovery is higher than the upper limit in Table 7, the upper limit in Table 7 must be used. Many of the analytes and surrogates do not have acceptance criteria. The laboratory should use 60–140% as interim acceptance criteria for recoveries of spiked analytes that do not have recovery limits specified in Table 7, and least 80% of the analytes should meet the 60–140% interim criteria until in-house LCS limits are developed. Alternatively, acceptance criteria for analytes that do not have recovery limits in Table 7 may be based on laboratory control charts. In-house QC acceptance criteria must be updated at least every two years.

8.5 Blank—A blank must be analyzed prior to each 12-hour shift to demonstrate freedom from contamination. A blank must also be analyzed after a sample containing a high concentration of an analyte or potentially interfering compound to demonstrate freedom from carry-over.

8.5.1 Spike the internal standards and surrogates into the blank. Analyze the blank immediately after analysis of the LCS (Section 8.4) and prior to analysis of the MS/MSD and samples to demonstrate freedom from contamination.

8.5.2 If any analyte of interest is found in the blank: At a concentration greater than the MDL for the analyte, at a concentration greater than one-third the regulatory compliance limit, or at a concentration greater than one-tenth the concentration in a sample analyzed during the 12-hour shift (section 8.4), *whichever is greater*; analysis of samples must be halted and samples affected by the blank must be re-analyzed. If, however, continued re-testing results in repeated blank contamination, the laboratory must document and report the failures (*e.g.*, as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority. Results associated with blank contamination for an analyte regulated in a discharge cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results.

8.6 Surrogate recoveries—The laboratory must evaluate surrogate recovery data in each sample against its in-house surrogate recovery limits for surrogates that do not have acceptance criteria in Table 7. The laboratory may use 60–140% as interim acceptance criteria for recoveries for surrogates not listed in Table 5. At least 80% of the surrogates must meet the 60–140% interim criteria until in-house limits are

developed. Alternatively, surrogate recovery limits may be developed from laboratory control charts.

8.6.1 Spike the surrogates into all samples, blanks, LCSs, and MS/MSDs. Compare surrogate recoveries against the QC acceptance criteria in Table 7. For surrogates in Table 5 without QC acceptance criteria in Table 7, and for other surrogates that may be used by the laboratory, limits must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 11 and 12). Alternatively, surrogate recovery limits may be developed from laboratory control charts. In-house QC acceptance criteria must be updated at least every two years.

8.6.2 If any recovery fails its criteria, attempt to find and correct the cause of the failure. See section 8.1.7 for disposition of failures.

8.7 Internal standard responses.

8.7.1 Calibration verification/LCS—The responses (GC peak heights or areas) of the internal standards in the calibration verification/LCS must be within 50% to 200% (1/2 to 2x) of their respective responses in the mid-point calibration standard. If they are not, repeat the LCS test using a fresh QC check sample (section 8.4.1) or perform and document system repair. Subsequent to repair, repeat the calibration verification/LCS test (section 8.4). If the responses are still not within 50% to 200%, re-calibrate the instrument (section 7) and repeat the calibration verification/LCS test.

8.7.2 Samples, blanks, and MS/MSDs—The responses (GC peak heights or areas) of each internal standard in each sample, blank, and MS/MSD must be within 50% to 200% (1/2 to 2x) of its respective response in the mid-point calibration standard. If, as a group, all internal standards are not within this range, perform and document system repair, repeat the calibration verification/LCS test (section 8.4), and re-analyze the affected samples. If a single internal standard is not within the 50% to 200% range, use an alternative internal standard for quantitation of the analyte referenced to the affected internal standard. It may be necessary to use the data system to calculate a new response factor from calibration data for the alternative internal standard/analyte pair. If an internal standard fails the 50–200% criteria and no analytes are detected in the sample, ignore the failure or report it if required by the regulatory/control authority.

8.8 As part of the QC program for the laboratory, control charts or statements of accuracy for wastewater samples must be assessed and records maintained periodically (see 40 CFR 136.7(c)(1)(viii)). After analysis of five or more spiked wastewater samples as in section 8.3, calculate the average percent recovery ( $P_x$ ) and the standard deviation of the percent recovery (sp). Express the accuracy assessment as a percent interval from  $P_x - 2_{sp}$  to  $P_x + 2_{sp}$ . For example, if  $P_x = 90\%$  and  $sp = 10\%$ , the accuracy interval is expressed as 70–110%. Update the accuracy assessment for each analyte on a regular basis (*e.g.*, after each 5–10 new accuracy measurements). If desired, statements of accuracy for laboratory performance, independent of performance on samples, may be developed using LCSs.

8.9 It is recommended that the laboratory adopt additional quality assurance practices for use with this method. The specific practices that are most productive depend upon the needs of the laboratory and the nature of the samples. Field duplicates may be analyzed to assess the precision of environmental measurements. Whenever possible, the laboratory should analyze standard reference materials and participate in relevant performance evaluation studies.

## 9. Sample Collection, Preservation, and Handling

9.1 Collect the sample as a grab sample in a glass container having a total volume of at least 25 mL. Fill the sample bottle just to overflowing in such a manner that no air bubbles pass through the sample as the bottle is being filled. Seal the bottle so that no air bubbles are entrapped in it. If needed, collect additional sample(s) for the MS/MSD (section 8.3).

9.2 Ice or refrigerate samples at  $\leq 6^\circ\text{C}$  from the time of collection until analysis, but do not freeze. If residual chlorine is present, add sodium thiosulfate preservative (10 mg/40 mL is sufficient for up to 5 ppm  $\text{Cl}_2$ ) to the empty sample bottle just prior to shipping to the sampling site. Any method suitable for field use may be employed to test for residual chlorine (Reference 14). Field test kits are also available for this purpose. If sodium thiosulfate interferes in the determination of the analytes, an alternative preservative (*e.g.*, ascorbic acid or sodium sulfite) may be used. If preservative has been added, shake the sample vigorously for one minute. Maintain the hermetic seal on the sample bottle until time of analysis.

9.3 If acrolein is to be determined, analyze the sample within 3 days. To extend the holding time to 14 days, acidify a separate sample to pH 4–5 with HCl using the procedure in section 9.7.

9.4 Experimental evidence indicates that some aromatic compounds, notably benzene, toluene, and ethyl benzene are susceptible to rapid biological degradation under certain environmental conditions (Reference 3). Refrigeration alone may not be adequate to preserve these compounds in wastewaters for more than seven days. To extend the holding time for aromatic compounds to 14 days, acidify the sample to approximately pH 2 using the procedure in section 9.7.

9.5 If halocarbons are to be determined, either use the acidified aromatics sample in section 9.4 or acidify a separate sample to a pH of about 2 using the procedure in section 9.7.

9.6 The ethers listed in Table 2 are prone to hydrolysis at pH 2 when a heated purge is used. Aqueous samples should not be acid preserved if these ethers are of interest, or if the alcohols they would form upon hydrolysis are of interest and the ethers are anticipated to present.

9.7 Sample acidification—Collect about 500 mL of sample in a clean container and adjust the pH of the sample to 4–5 for acrolein (section 9.3), or to about 2 for the aromatic compounds (section 9.4) by adding 1+1 HCl while swirling or stirring. Check the pH with narrow range pH paper. Fill a sample container as described in section 9.1. Alternatively, fill a precleaned vial (section

5.1.1) that contains approximately 0.25 mL of 1+1 HCl with sample as in section 9.1. If preserved using this alternative procedure, the pH of the sample can be verified to be <2 after some of the sample is removed for analysis. Acidification will destroy 2-chloroethylvinyl ether; therefore, determine 2-chloroethylvinyl ether from the unacidified sample.

9.8 All samples must be analyzed within 14 days of collection (Reference 3), unless specified otherwise in sections 9.3–9.7.

## 10. Sample Purging and Gas Chromatography

10.1 The footnote to Table 3 gives the suggested GC column and operating conditions MDLs and MLs for many of the analytes are given in Table 1. Retention times for many of the analytes are given in Table 3. Sections 10.2 through 10.7 suggest procedures that may be used with a manual purge-and-trap system. Auto-samplers and other columns or chromatographic conditions may be used if requirements in this method are met. Prior to performing analyses, and between analyses, it may be necessary to bake the purge-and-trap and GC systems (section 3.3).

10.2 Attach the trap inlet to the purging device, and set the purge-and-trap system to purge. Open the syringe valve located on the purging device sample introduction needle.

10.3 Allow the sample to come to ambient temperature prior to pouring an aliquot into the syringe. Remove the plunger from a syringe and attach a closed syringe valve. Open the sample bottle (or standard) and carefully pour the sample into the syringe barrel to just short of overflowing. Replace the syringe plunger and compress the sample. Open the syringe valve and vent any residual air while adjusting the sample volume. Since this process of taking an aliquot destroys the validity of the sample for future analysis, the analyst should fill a second syringe at this time to protect against possible loss of data. Add the surrogate spiking solution (section 6.7) and internal standard spiking solution (section 7.3.1.3) through the valve bore, then close the valve. The surrogate and internal standards may be mixed and added as a single spiking solution. Autosamplers designed for purge-and-trap analysis of volatiles also may be used.

10.4 Attach the syringe valve assembly to the syringe valve on the purging device. Open the syringe valve and inject the sample into the purging chamber.

10.5 Close both valves and purge the sample at a temperature, flow rate, and duration sufficient to purge the less-volatile analytes onto the trap, yet short enough to prevent blowing the more-volatile analytes through the trap. The temperature, flow rate, and time should be determined by test. The same purge temperature, flow rate, and purge time must be used for all calibration, QC, and field samples.

10.6 After the purge, set the purge-and-trap system to the desorb mode, and begin the temperature program of the gas chromatograph. Introduce the trapped materials to the GC column by rapidly heating the trap to the desorb temperature

while backflushing the trap with carrier gas at the flow rate and for the time necessary to desorb the analytes of interest. The optimum temperature, flow rate, and time should be determined by test. The same temperature, desorb time, and flow rate must be used for all calibration, QC, and field samples. If heating of the trap does not result in sharp peaks for the early eluting analytes, the GC column may be used as a secondary trap by cooling to an ambient or subambient temperature. To avoid carry-over and interferences, maintain the trap at the desorb temperature and flow rate until the analytes, interfering compounds, and excess water are desorbed. The optimum conditions should be determined by test.

10.7 Start MS data acquisition at the start of the desorb cycle and stop data collection when the analytes of interest, potentially interfering compounds, and water have eluted (see the footnote to Table 3 for conditions).

10.8 Cool the trap to the purge temperature and return the trap to the purge mode. When the trap is cool, the next sample can be analyzed.

## 11. Performance Tests

11.1 At the beginning of each 12-hour shift during which standards or samples will be analyzed, perform the tests in sections 11.2–11.3 to verify system performance. Use the instrument operating conditions in the footnotes to Table 3 for these performance tests. Alternative conditions may be used so as long as all QC requirements are met.

11.2 BFB—Inject 50 ng of BFB solution directly on the column. Alternatively, add BFB to reagent water or an aqueous standard such that 50 ng or less of BFB will be introduced into the GC. Analyze according to section 10. Confirm that all criteria in section 7.3.2.2 and Table 4 are met. If all criteria are not met, perform system repair, retune the mass spectrometer, and repeat the test until all criteria are met.

11.3 Verify calibration with the LCS (section 8.4) after the criteria for BFB are met (Reference 15) and prior to analysis of a blank or sample. After verification, analyze a blank (section 8.5) to demonstrate freedom from contamination and carry-over at the MDL. Tests for BFB, the LCS, and the blank are outside of the 12-hour shift, and the 12-hour shift includes samples and matrix spikes and matrix spike duplicates (section 8.4). The total time for analysis of BFB, the LCS, the blank, and the 12-hour shift must not exceed 14 hours.

## 12. Qualitative Identification

12.1 Identification is accomplished by comparison of results from analysis of a sample or blank with data stored in the GC/MS data system (section 7.3.2.3). Identification of an analyte is confirmed per sections 12.1.1 through 12.1.4.

12.1.1 The signals for the quantitation and secondary m/z's stored in the data system (section 7.3.2.3) for each analyte of interest must be present and must maximize within the same two consecutive scans.

12.1.2 The retention time for the analyte should be within  $\pm 10$  seconds of the analyte

in the LCS run at the beginning of the shift (section 8.4).

**Note:** Retention time windows other than  $\pm 10$  seconds may be appropriate depending on the performance of the gas chromatograph or observed retention time drifts due to certain types of matrix effects. Relative retention time (RRT) may be used as an alternative to absolute retention times if retention time drift is a concern. RRT is a unitless quantity (see section 20.2), although some procedures refer to “RRT units” in providing the specification for the agreement between the RRT values in the sample and the LCS or other standard. When significant retention time drifts are observed, dilutions or spiked samples may help the analyst determine the effects of the matrix on elution of the target analytes and to assist in qualitative identification.

12.1.3 Either the background corrected EICP areas, or the corrected relative intensities of the mass spectral peaks at the GC peak maximum, must agree within 50% to 200% ( $\frac{1}{2}$  to 2 times) for the quantitation and secondary m/z's in the reference mass spectrum stored in the data system (section 7.3.2.3), or from a reference library. For example, if a peak has an intensity of 20% relative to the base peak, the analyte is identified if the intensity of the peak in the sample is in the range of 10% to 40% of the base peak.

12.1.4 If the acquired mass spectrum is contaminated, or if identification is ambiguous, an experienced spectrometrist (section 1.6) must determine the presence or absence of the compound.

12.2 Structural isomers that produce very similar mass spectra should be identified as individual isomers if they have sufficiently different gas chromatographic retention times. Sufficient gas chromatographic resolution is achieved if the height of the valley between two isomer peaks is less than 50% of the average of the two peak heights. Otherwise, structural isomers are identified as isomeric pairs. The resolution should be verified on the mid-point concentration of the initial calibration as well as the laboratory designated continuing calibration verification level if closely eluting isomers are to be reported.

## 13. Calculations

13.1 When an analyte has been identified, quantitation of that analyte is based on the integrated abundance from the EICP of the primary characteristic m/z in Table 5 or 6. Calculate the concentration using the response factor (RF) determined in section 7.3.3 and Equation 2. If a calibration curve was used, calculate the concentration using the regression equation for the curve. If the concentration of an analyte exceeds the calibration range, dilute the sample by the minimum amount to bring the concentration into the calibration range, and re-analyze. Determine a dilution factor (DF) from the amount of the dilution. For example, if the extract is diluted by a factor of 2, DF = 2.

$$C_s (\mu\text{g/L}) = \frac{A_s \times C_{is} \times DF}{A_{is} \times RF}$$

Equation 2

Where:

$C_s$  = Concentration of the analyte in the sample, and the other terms are as defined in Section 7.3.3.

### 13.2 Reporting of results

As noted in section 1.4.1, EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described here are focused on such monitoring needs and may not be relevant to other uses of this method.

13.2.1 Report results for wastewater samples in  $\mu\text{g/L}$  without correction for recovery. (Other units may be used if required by a permit.) Report all QC data with the sample results.

13.2.2 Reporting level. Unless otherwise specified in by a regulatory authority or in a discharge permit, results for analytes that meet the identification criteria are reported down to the concentration of the ML established by the laboratory through calibration of the instrument (see section 7.3.2 and the glossary for the derivation of the ML). EPA considers the terms "reporting limit," "limit of quantitation," "quantitation limit," and "minimum level" to be synonymous.

13.2.2.1 Report a result for each analyte in each field sample or QC standard at or above the ML to 3 significant figures. Report a result for each analyte found in each field sample or QC standard below the ML as "<ML," where ML is the concentration of the analyte at the ML, or as required by the regulatory/control authority or permit. Report a result for each analyte in a blank at or above the MDL to 2 significant figures. Report a result for each analyte found in a blank below the MDL as "<MDL," where MDL is the concentration of the analyte at the MDL, or as required by the regulatory/control authority or permit.

13.2.2.2 In addition to reporting results for samples and blanks separately, the concentration of each analyte in a blank associated with the sample may be subtracted from the result for that sample, but only if requested or required by a regulatory authority or in a permit. In this case, both the sample result and the blank result must be reported together.

13.2.2.3 Report a result for an analyte found in a sample that has been diluted at the least dilute level at which the area at the quantitation  $m/z$  is within the calibration range (*i.e.*, above the ML for the analyte) and the MS/MSD recovery and RPD are within their respective QC acceptance criteria (Table 7). This may require reporting results for some analytes from different analyses.

13.2.3 Results from tests performed with an analytical system that is not in control (*i.e.*, that does not meet acceptance criteria for any of the QC test in this method) must be documented and reported (*e.g.*, as a qualifier on results), unless the failure is not required to be reported as determined by the regulatory/control authority. Results

associated with a QC failure cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results. If the holding time would be exceeded for a re-analysis of the sample, the regulatory/control authority should be consulted for disposition.

### 14. Method Performance

14.1 This method was tested by 15 laboratories using reagent water, drinking water, surface water, and industrial wastewaters spiked at six concentrations over the range 5–600  $\mu\text{g/L}$  (References 4 and 16). Single-operator precision, overall precision, and method accuracy were found to be directly related to the concentration of the analyte and essentially independent of the sample matrix. Linear equations to describe these relationships are presented in Table 8.

14.2 As noted in section 1.1, this method was validated through an interlaboratory study conducted in the early 1980s. However, the fundamental chemistry principles used in this method remain sound and continue to apply.

### 15. Pollution Prevention

15.1 Pollution prevention encompasses any technique that reduces or eliminates the quantity or toxicity of waste at the point of generation. Many opportunities for pollution prevention exist in laboratory operations. EPA has established a preferred hierarchy of environmental management techniques that places pollution prevention as the management option of first choice. Whenever feasible, the laboratory should use pollution prevention techniques to address waste generation. When wastes cannot be reduced at the source, the Agency recommends recycling as the next best option.

15.2 The analytes in this method are used in extremely small amounts and pose little threat to the environment when managed properly. Standards should be prepared in volumes consistent with laboratory use to minimize the disposal of excess volumes of expired standards.

15.3 For information about pollution prevention that may be applied to laboratories and research institutions, consult "Less is Better: Laboratory Chemical Management for Waste Reduction," available from the American Chemical Society's Department of Governmental Relations and Science Policy, 1155 16th Street NW., Washington, DC 20036, 202-872-4477.

### 16. Waste Management

16.1 The laboratory is responsible for complying with all Federal, State, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions, and to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. An overview of requirements can

be found in Environmental Management Guide for Small Laboratories (EPA 233-B-98-001).

16.2 Samples at  $\text{pH} < 2$ , or  $\text{pH} > 12$ , are hazardous and must be handled and disposed of as hazardous waste, or neutralized and disposed of in accordance with all federal, state, and local regulations. It is the laboratory's responsibility to comply with all federal, state, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions. The laboratory using this method has the responsibility to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. For further information on waste management, see "The Waste Management Manual for Laboratory Personnel," also available from the American Chemical Society at the address in Section 15.3.

16.3 Many analytes in this method decompose above 500 °C. Low-level waste such as absorbent paper, tissues, and plastic gloves may be burned in an appropriate incinerator. Gross quantities of neat or highly concentrated solutions of toxic or hazardous chemicals should be packaged securely and disposed of through commercial or governmental channels that are capable of handling these types of wastes.

16.4 For further information on waste management, consult "Waste Management Manual for Laboratory Personnel and Less is Better-Laboratory Chemical Management for Waste Reduction," available from the American Chemical Society's Department of Governmental Relations and Science Policy, 1155 16th Street NW., Washington, DC 20036, 202-872-4477.

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18. Tables

TABLE 1—PURGEABLES<sup>1</sup>

Analyte	CAS Registry No.	MDL (µg/L) <sup>2</sup>	ML (µg/L) <sup>3</sup>
Acrolein	107-02-8		
Acrylonitrile	107-13-1		
Benzene	71-43-2	4.4	13.2
Bromodichloromethane	75-27-4	2.2	6.6
Bromoform	75-25-2	4.7	14.1
Bromomethane	74-83-9		
Carbon tetrachloride	56-23-5	2.8	8.4
Chlorobenzene	108-90-7	6.0	18.0
Chloroethane	75-00-3		
2-Chloroethylvinyl ether	110-75-8		
Chloroform	67-66-3	1.6	4.8
Chloromethane	74-87-3		
Dibromochloromethane	124-48-1	3.1	9.3
1,2-Dichlorobenzene	95-50-1		
1,3-Dichlorobenzene	541-73-1		
1,4-Dichlorobenzene	106-46-7		
1,1-Dichloroethane	75-34-3	4.7	14.1
1,2-Dichloroethane	107-06-2	2.8	8.4
1,1-Dichloroethene	75-35-4	2.8	8.4
trans-1,2-Dichloroethene	156-60-5	1.6	4.8
1,2-Dichloropropane	78-87-5	6.0	18.0
cis-1,3-Dichloropropene	10061-01-5	5.0	15.0
trans-1,3-Dichloropropene	10061-02-6		
Ethyl benzene	100-41-4	7.2	21.6
Methylene chloride	75-09-2	2.8	8.4
1,1,2,2-Tetrachloroethane	79-34-5	6.9	20.7
Tetrachloroethene	127-18-4	4.1	12.3
Toluene	108-88-3	6.0	18.0
1,1,1-Trichloroethane	71-55-6	3.8	11.4
1,1,2-Trichloroethane	79-00-5	5.0	15.0
Trichloroethene	79-01-6	1.9	5.7
Vinyl chloride	75-01-4		

<sup>1</sup> All the analytes in this table are Priority Pollutants (40 CFR part 423, appendix A).

<sup>2</sup> MDL values from the 1984 promulgated version of Method 624.

<sup>3</sup> ML = Minimum Level—see Glossary for definition and derivation.

TABLE 2—ADDITIONAL PURGEABLES

Analyte	CAS Registry
Acetone <sup>1</sup>	67-64-1
Acetonitrile <sup>2</sup>	75-05-8
Acrolein	107-02-8
Acrylonitrile	107-13-1
Allyl alcohol <sup>1</sup>	107-18-6
Allyl chloride	107-05-1
<i>t</i> -Amyl ethyl ether (TAEE)	919-94-8
<i>t</i> -Amyl methyl ether (TAME)	994-058
Benzyl chloride	100-44-7
Bromoacetone <sup>2</sup>	598-31-2
Bromobenzene	108-86-1
Bromochloromethane	74-97-5
1,3-Butadiene	106-99-0
<i>n</i> -Butanol <sup>1</sup>	71-36-3

TABLE 2—ADDITIONAL PURGEABLES—Continued

Analyte	CAS Registry
2-Butanone (MEK) <sup>1,2</sup>	78-93-3
<i>t</i> -Butyl alcohol (TBA)	75-65-0
<i>n</i> -Butylbenzene	104-51-8
<i>sec</i> -Butylbenzene	135-98-8
<i>t</i> -Butylbenzene	98-06-6
<i>t</i> -Butyl ethyl ether (ETBE)	637-92-3
Carbon disulfide	75-15-0
Chloral hydrate <sup>2</sup>	302-17-0
Chloroacetonitrile <sup>1</sup>	107-14-2
1-Chlorobutane	109-69-3
Chlorodifluoromethane	75-45-6
2-Chloroethanol <sup>2</sup>	107-07-3
bis (2-Chloroethyl) sulfide <sup>2</sup>	505-60-2

TABLE 2—ADDITIONAL PURGEABLES—Continued

Analyte	CAS Registry
1-Chlorohexanone	20261-68-1
Chloroprene (2-chloro-1,3-butadiene)	126-99-8
3-Chloropropene	107-05-1
3-Chloropropionitrile	542-76-7
2-Chlorotoluene	95-49-8
4-Chlorotoluene	106-43-4
Crotonaldehyde <sup>1,2</sup>	123-73-9
Cyclohexanone	108-94-1
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Dibromoethane	106-93-4
Dibromomethane	74-95-3
<i>cis</i> -1,4-Dichloro-2-butene	1476-11-5

TABLE 2—ADDITIONAL PURGEABLES—  
Continued

Analyte	CAS Registry
<i>trans</i> -1,4-Dichloro-2-butene ..	110-57-6
<i>cis</i> -1,2-Dichloroethene .....	156-59-2
Dichlorodifluoromethane .....	75-71-8
1,3-Dichloropropane .....	142-28-9
2,2-Dichloropropane .....	590-20-7
1,3-Dichloro-2-propanol <sup>2</sup> .....	96-23-1
1,1-Dichloropropene .....	563-58-6
<i>cis</i> -1,3-Dichloropropene .....	10061-01-5
1:2,3:4-Diepoxybutane .....	1464-53-5
Diethyl ether .....	60-29-7
Diisopropyl ether (DIPE) .....	108-20-3
1,4-Dioxane <sup>2</sup> .....	123-91-1
Epichlorohydrin <sup>2</sup> .....	106-89-8
Ethanol <sup>2</sup> .....	64-17-5
Ethyl acetate <sup>2</sup> .....	141-78-6
Ethyl methacrylate .....	97-63-2
Ethylene oxide <sup>2</sup> .....	75-21-8
Hexachlorobutadiene .....	87-63-3
Hexachloroethane .....	67-72-1
2-Hexanone <sup>2</sup> .....	591-78-6
Iodomethane .....	74-88-4
Isobutyl alcohol <sup>1</sup> .....	78-83-1
Isopropylbenzene .....	98-82-8
<i>p</i> -Isopropyltoluene .....	99-87-6
Methacrylonitrile <sup>2</sup> .....	126-98-7
Methanol <sup>2</sup> .....	67-56-1
Malonitrile <sup>2</sup> .....	109-77-3
Methyl acetate .....	79-20-9
Methyl acrylate .....	96-33-3
Methyl cyclohexane .....	108-87-2
Methyl iodide .....	74-88-4
Methyl methacrylate .....	78-83-1
4-Methyl-2-pentanone (MIBK) <sup>2</sup> .....	108-10-1
Methyl- <i>t</i> -butyl ether (MTBE) .....	1634-04-4
Naphthalene .....	91-20-3
Nitrobenzene .....	98-95-3
<i>N</i> -Nitroso- <i>di-n</i> -butylamine <sup>2</sup> ..	924-16-3
2-Nitropropane .....	79-46-9
Paraldehyde <sup>2</sup> .....	123-63-7
Pentachloroethane <sup>2</sup> .....	76-01-7
Pentafluorobenzene .....	363-72-4
2-Pentanone <sup>2</sup> .....	107-19-7
2-Picoline <sup>2</sup> .....	109-06-8
1-Propanol <sup>1</sup> .....	71-23-8
2-Propanol <sup>1</sup> .....	67-63-0
Propargyl alcohol <sup>2</sup> .....	107-19-7
<i>beta</i> -Propiolactone <sup>2</sup> .....	57-58-8
Propionitrile (ethyl cyanide) <sup>1</sup> ..	107-12-0
<i>n</i> -Propylamine .....	107-10-8
<i>n</i> -Propylbenzene .....	103-65-1
Pyridine <sup>2</sup> .....	110-86-1
Styrene .....	100-42-5
1,1,1,2-Tetrachloroethane ....	630-20-6
Tetrahydrofuran .....	109-99-9
<i>o</i> -Toluidine <sup>2</sup> .....	95-53-4
1,2,3-Trichlorobenzene .....	87-61-6
Trichlorofluoromethane .....	75-69-4
1,2,3-Trichloropropane .....	96-18-4
1,2,3-Trimethylbenzene .....	526-73-8

TABLE 2—ADDITIONAL PURGEABLES—  
Continued

Analyte	CAS Registry
1,2,4-Trimethylbenzene .....	95-63-6
1,3,5-Trimethylbenzene .....	108-67-8
Vinyl acetate .....	108-05-4
<i>m</i> -Xylene <sup>3</sup> .....	108-38-3
<i>o</i> -Xylene <sup>3</sup> .....	95-47-6
<i>p</i> -Xylene <sup>3</sup> .....	106-42-3
<i>m+o</i> -Xylene <sup>3</sup> .....	179601-22-0
<i>m+p</i> -Xylene <sup>3</sup> .....	179601-23-1
<i>o+p</i> -Xylene <sup>3</sup> .....	136777-61-2

<sup>1</sup> Determined at a purge temperature of 80 °C.

<sup>2</sup> May be detectable at a purge temperature of 80 °C.

<sup>3</sup> Determined in combination separated by GC column. Most GC columns will resolve *o*-xylene from *m+p*-xylene. Report using the CAS number for the individual xylene or the combination, as determined.

TABLE 3—EXAMPLE RETENTION TIMES

Analyte	Retention time (min)
Chloromethane .....	3.68
Vinyl chloride .....	3.92
Bromomethane .....	4.50
Chloroethane .....	4.65
Trichlorofluoromethane .....	5.25
Diethyl ether .....	5.88
Acrolein .....	6.12
1,1-Dichloroethene .....	6.30
Acetone .....	6.40
Iodomethane .....	6.58
Carbon disulfide .....	6.72
3-Chloropropene .....	6.98
Methylene chloride .....	7.22
Acrylonitrile .....	7.63
<i>trans</i> -1,2-Dichloroethene .....	7.73
1,1-Dichloroethane .....	8.45
Vinyl acetate .....	8.55
Allyl alcohol .....	8.58
2-Chloro-1,3-butadiene .....	8.65
Methyl ethyl ketone .....	9.50
<i>cis</i> -1,2-Dichloroethene .....	9.50
Ethyl cyanide .....	9.57
Methacrylonitrile .....	9.83
Chloroform .....	10.05
1,1,1-Trichloroethane .....	10.37
Carbon tetrachloride .....	10.70
Isobutanol .....	10.77
Benzene .....	10.98
1,2-Dichloroethane .....	11.00
Crotonaldehyde .....	11.45
Trichloroethene .....	12.08
1,2-Dichloropropane .....	12.37
Methyl methacrylate .....	12.55
<i>p</i> -Dioxane .....	12.63
Dibromomethane .....	12.65
Bromodichloromethane .....	12.95
Chloroacetonitrile .....	13.27

TABLE 3—EXAMPLE RETENTION  
TIMES—Continued

Analyte	Retention time (min)
2-Chloroethylvinyl ether .....	13.45
<i>cis</i> -1,3-Dichloropropene .....	13.65
4-Methyl-2-pentanone .....	13.83
Toluene .....	14.18
<i>trans</i> -1,3-Dichloropropene ....	14.57
Ethyl methacrylate .....	14.70
1,1,2-Trichloroethane .....	14.93
1,3-Dichloropropane .....	15.18
Tetrachloroethene .....	15.22
2-Hexanone .....	15.30
Dibromochloromethane .....	15.68
1,2-Dibromoethane .....	15.90
Chlorobenzene .....	16.78
Ethylbenzene .....	16.82
1,1,1,2-Tetrachloroethane ....	16.87
<i>m+p</i> -Xylene .....	17.08
<i>o</i> -Xylene .....	17.82
Bromoform .....	18.27
Bromofluorobenzene .....	18.80
1,1,2,2-Tetrachloroethane ....	18.98
1,2,3-Trichloropropane .....	19.08
<i>trans</i> -1,4-Dichloro-2-butene ..	19.12

Column: 75 m x 0.53 mm ID x 3.0 μm wide-bore DB-624

Conditions: 40 °C for 4 min, 9 °C/min to 200 °C, 20 °C/min (or higher) to 250 °C, hold for 20 min at 250 °C to remove water.

Carrier gas flow rate: 6–7 mL/min at 40 °C.

Inlet split ratio: 3:1.

Interface split ratio: 7:2.

TABLE 4—BFB KEY *m/z* ABUNDANCE  
CRITERIA<sup>1</sup>

<i>m/z</i>	Abundance criteria
50 .....	15–40% of <i>m/z</i> 95.
75 .....	30–60% of <i>m/z</i> 95.
95 .....	Base Peak, 100% Relative Abundance.
96 .....	5–9% of <i>m/z</i> 95.
173 .....	<2% of <i>m/z</i> 174.
174 .....	>50% of <i>m/z</i> 95.
175 .....	5–9% of <i>m/z</i> 174.
176 .....	>95% but <101% of <i>m/z</i> 174.
177 .....	5–9% of <i>m/z</i> 176.

<sup>1</sup> Abundance criteria are for a quadrupole mass spectrometer. Alternative tuning criteria from other published EPA reference methods may be used, provided method performance is not adversely affected. Alternative tuning criteria specified by an instrument manufacturer may also be used for another type of mass spectrometer, or for an alternative carrier gas, provided method performance is not adversely affected.

TABLE 5—SUGGESTED SURROGATE AND INTERNAL STANDARDS

Analyte	Retention time (min) <sup>1</sup>	Primary <i>m/z</i>	Secondary <i>m/z</i> 's
Benzene- <i>d</i> <sub>6</sub> .....	10.95	84	.....
4-Bromofluorobenzene .....	18.80	95	174, 176
Bromochloromethane .....	9.88	128	49, 130, 51
2-Bromo-1-chloropropane .....	14.80	77	79, 156

TABLE 5—SUGGESTED SURROGATE AND INTERNAL STANDARDS—Continued

Analyte	Retention time (min) <sup>1</sup>	Primary m/z	Secondary m/z's
2-Butanone-d <sub>5</sub>	9.33	77	
Chloroethane-d <sub>5</sub>	4.63	71	
Chloroform- <sup>13</sup> C	10.00	86	
1,2-Dichlorobenzene-d <sub>4</sub>		152	
1,4-Dichlorobutane	18.57	55	90, 92
1,2-Dichloroethane-d <sub>4</sub>	10.88	102	
1,1-Dichloroethene-d <sub>2</sub>	6.30	65	
1,2-Dichloropropane-d <sub>6</sub>	12.27	67	
<i>trans</i> -1,3-Dichloropropene-d <sub>4</sub>	14.50	79	
1,4-Difluorobenzene		114	63, 88
Ethylbenzene-d <sub>10</sub>	16.77	98	
Fluorobenzene		96	70
2-Hexanone-d <sub>5</sub>	15.30	63	
Pentafluorobenzene		168	
1,1,2,2-Tetrachloroethane-d <sub>2</sub>	18.93	84	
Toluene-d <sub>8</sub>	14.13	100	
Vinyl chloride-d <sub>3</sub>	3.87	65	

<sup>1</sup> For chromatographic conditions, see the footnote to Table 3.

TABLE 6—CHARACTERISTIC m/z's FOR PURGEABLE ORGANICS

Analyte	Primary m/z	Secondary m/z's
Acrolein	56	55 and 58.
Acrylonitrile	53	52 and 51.
Chloromethane	50	52.
Bromomethane	94	96.
Vinyl chloride	62	64.
Chloroethane	64	66.
Methylene chloride	84	49, 51, and 86.
Trichlorofluoromethane	101	103.
1,1-Dichloroethene	96	61 and 98.
1,1-Dichloroethane	63	65, 83, 85, 98, and 100.
<i>trans</i> -1,2-Dichloroethene	96	61 and 98.
Chloroform	83	85.
1,2-Dichloroethane	98	62, 64, and 100.
1,1,1-Trichloroethane	97	99, 117, and 119.
Carbon tetrachloride	117	119 and 121.
Bromodichloromethane	83	127, 85, and 129.
1,2-Dichloropropane	63	112, 65, and 114.
<i>trans</i> -1,3-Dichloropropene	75	77.
Trichloroethene	130	95, 97, and 132.
Benzene	78	
Dibromochloromethane	127	129, 208, and 206.
1,1,2-Trichloroethane	97	83, 85, 99, 132, and 134.
<i>cis</i> -1,3-Dichloropropene	75	77.
2-Chloroethylvinyl ether	106	63 and 65.
Bromoform	173	171, 175, 250, 252, 254, and 256.
1,1,2,2-Tetrachloroethane	168	83, 85, 131, 133, and 166.
Tetrachloroethene	164	129, 131, and 166.
Toluene	92	91.
Chlorobenzene	112	114.
Ethyl benzene	106	91.
1,3-Dichlorobenzene	146	148 and 111.
1,2-Dichlorobenzene	146	148 and 111.
1,4-Dichlorobenzene	146	148 and 111.

TABLE 7—LCS (Q), DOC (S AND  $\bar{X}$ ), AND MS/MSD (P AND RPD) ACCEPTANCE CRITERIA <sup>1</sup>

Analyte	Range for Q (%)	Limit for s (%)	Range for $\bar{X}$ (%)	Range for P <sub>1</sub> , P <sub>2</sub> (%)	Limit for RPD
Acrolein	60–140	30	50–150	40–160	60
Acrylonitrile	60–140	30	50–150	40–160	60
Benzene	65–135	33	75–125	37–151	61
Benzene-d <sub>6</sub>					
Bromodichloromethane	65–135	34	50–140	35–155	56
Bromoform	70–130	25	57–156	45–169	42

TABLE 7—LCS (Q), DOC (S AND  $\bar{X}$ ), AND MS/MSD (P AND RPD) ACCEPTANCE CRITERIA<sup>1</sup>—Continued

Analyte	Range for Q (%)	Limit for s (%)	Range for $\bar{X}$ (%)	Range for P <sub>1</sub> , P <sub>2</sub> (%)	Limit for RPD
Bromomethane	15–185	90	D–206	D–242	61
2-Butanone-d <sub>5</sub>					
Carbon tetrachloride	70–130	26	65–125	70–140	41
Chlorobenzene	65–135	29	82–137	37–160	53
Chloroethane	40–160	47	42–202	14–230	78
Chloroethane-d <sub>5</sub>					
2-Chloroethylvinyl ether	D–225	130	D–252	D–305	71
Chloroform	70–135	32	68–121	51–138	54
Chloroform- <sup>13</sup> C					
Chloromethane	D–205	472	D–230	D–273	60
Dibromochloromethane	70–135	30	69–133	53–149	50
1,2-Dichlorobenzene	65–135	31	59–174	18–190	57
1,2-Dichlorobenzene-d <sub>4</sub>					
1,3-Dichlorobenzene	70–130	24	75–144	59–156	43
1,4-Dichlorobenzene	65–135	31	59–174	18–190	57
1,1-Dichloroethane	70–130	24	71–143	59–155	40
1,2-Dichloroethane	70–130	29	72–137	49–155	49
1,2-Dichloroethane-d <sub>4</sub>					
1,1-Dichloroethene	50–150	40	19–212	D–234	32
1,1-Dichloroethene-d <sub>2</sub>					
trans-1,2-Dichloroethene	70–130	27	68–143	54–156	45
1,2-Dichloropropane	35–165	69	19–181	D–210	55
1,2-Dichloropropane-d <sub>6</sub>					
cis-1,3-Dichloropropene	25–175	79	5–195	D–227	58
trans-1,3-Dichloropropene	50–150	52	38–162	17–183	86
trans-1,3-Dichloropropene-d <sub>4</sub>					
Ethyl benzene	60–140	34	75–134	37–162	63
2-Hexanone-d <sub>5</sub>					
Methylene chloride	60–140	192	D–205	D–221	28
1,1,2,2-Tetrachloroethane	60–140	36	68–136	46–157	61
1,1,2,2-Tetrachloroethane-d <sub>2</sub>					
Tetrachloroethene	70–130	23	65–133	64–148	39
Toluene	70–130	22	75–134	47–150	41
Toluene-d <sub>8</sub>					
1,1,1-Trichloroethane	70–130	21	69–151	52–162	36
1,1,2-Trichloroethane	70–130	27	75–136	52–150	45
Trichloroethene	65–135	29	75–138	70–157	48
Trichlorofluoromethane	50–150	50	45–158	17–181	84
Vinyl chloride	5–195	100	D–218	D–251	66
Vinyl chloride-d <sub>3</sub>					

<sup>1</sup> Criteria were calculated using an LCS concentration of 20 µg/L.

Q = Percent recovery in calibration verification/LCS (section 8.4).

s = Standard deviation of percent recovery for four recovery measurements (section 8.2.4).

$\bar{X}$  = Average percent recovery for four recovery measurements (section 8.2.4).

P = Percent recovery for the MS or MSD (section 8.3.3).

D = Detected; result must be greater than zero.

**Notes:**

1. Criteria for pollutants are based upon the method performance data in Reference 4. Where necessary, limits have been broadened to assure applicability to concentrations below those used to develop Table 7.

2. Criteria for surrogates are from EPA CLP SOM01.2D.

TABLE 8—RECOVERY AND PRECISION AS FUNCTIONS OF CONCENTRATION

Analyte	Recovery, X' (µg/L)	Single analyst precision, s' (µg/L)	Overall precision, S' (µg/L)
Benzene	0.93C+2.00	20.26 $\bar{X}$ – 1.74	0.25 $\bar{X}$ – 1.33
Bromodichloromethane	1.03C – 1.58	0.15 $\bar{X}$ +0.59	0.20 $\bar{X}$ +1.13
Bromoform	1.18C – 2.35	0.12 $\bar{X}$ +0.36	0.17 $\bar{X}$ +1.38
Bromomethane <sup>a</sup>	1.00C	0.43 $\bar{X}$	0.58 $\bar{X}$
Carbon tetrachloride	1.10C – 1.68	0.12 $\bar{X}$ +0.25	0.11 $\bar{X}$ +0.37
Chlorobenzene	0.98C+2.28	0.16 $\bar{X}$ – 0.09	0.26 $\bar{X}$ – 1.92
Chloroethane	1.18C+0.81	0.14 $\bar{X}$ +2.78	0.29 $\bar{X}$ +1.75
2-Chloroethylvinyl ether <sup>a</sup>	1.00C	0.62 $\bar{X}$	0.84 $\bar{X}$
Chloroform	0.93C+0.33	0.16 $\bar{X}$ +0.22	0.18 $\bar{X}$ +0.16
Chloromethane	1.03C+0.81	0.37 $\bar{X}$ +2.14	0.58 $\bar{X}$ +0.43
Dibromochloromethane	1.01C – 0.03	0.17 $\bar{X}$ – 0.18	0.17 $\bar{X}$ +0.49
1,2-Dichlorobenzene <sup>b</sup>	0.94C+4.47	0.22 $\bar{X}$ – 1.45	0.30 $\bar{X}$ – 1.20
1,3-Dichlorobenzene	1.06C+1.68	0.14 $\bar{X}$ – 0.48	0.18 $\bar{X}$ – 0.82

TABLE 8—RECOVERY AND PRECISION AS FUNCTIONS OF CONCENTRATION—Continued

Analyte	Recovery, X' (µg/L)	Single analyst precision, s,' (µg/L)	Overall precision, S' (µg/L)
1,4-Dichlorobenzene <sup>b</sup>	0.94C+4.47	0.22 $\bar{X}$ - 1.45	0.30 $\bar{X}$ - 1.20
1,1-Dichloroethane	1.05C+0.36	0.13 $\bar{X}$ - 0.05	0.16 $\bar{X}$ +0.47
1,2-Dichloroethane	1.02C+0.45	0.17 $\bar{X}$ - 0.32	0.21 $\bar{X}$ - 0.38
1,1-Dichloroethene	1.12C+0.61	0.17 $\bar{X}$ +1.06	0.43 $\bar{X}$ - 0.22
<i>trans</i> -1,2,-Dichloroethene	1.05C+0.03	0.14 $\bar{X}$ - +0.09	0.19 $\bar{X}$ - +0.17
1,2-Dichloropropane <sup>a</sup>	1.00C	0.33 $\bar{X}$	0.45 $\bar{X}$
<i>cis</i> -1,3-Dichloropropene <sup>a</sup>	1.00C	0.38 $\bar{X}$	0.52 $\bar{X}$
<i>trans</i> -1,3-Dichloropropene <sup>a</sup>	1.00C	0.25 $\bar{X}$	0.34 $\bar{X}$
Ethyl benzene	0.98C+2.48	0.14 $\bar{X}$ +1.00	0.26 $\bar{X}$ - 1.72
Methylene chloride	0.87C+1.88	0.15 $\bar{X}$ +1.07	0.32 $\bar{X}$ +4.00
1,1,2,2-Tetrachloroethane	0.93C+1.76	0.16 $\bar{X}$ +0.69	0.20 $\bar{X}$ +0.41
Tetrachloroethene	1.06C+0.60	0.13 $\bar{X}$ - 0.18	0.16 $\bar{X}$ - 0.45
Toluene	0.98C+2.03	0.15 $\bar{X}$ - 0.71	0.22 $\bar{X}$ - 1.71
1,1,1-Trichloroethane	1.06C+0.73	0.12 $\bar{X}$ - 0.15	0.21 $\bar{X}$ - 0.39
1,1,2-Trichloroethane	0.95C+1.71	0.14 $\bar{X}$ +0.02	0.18 $\bar{X}$ +0.00
Trichloroethene	1.04C+2.27	0.13 $\bar{X}$ +0.36	0.12 $\bar{X}$ +0.59
Trichlorofluoromethane	0.99C+0.39	0.33 $\bar{X}$ - 1.48	0.34 $\bar{X}$ - 0.39
Vinyl chloride	1.00C	0.48 $\bar{X}$	0.65 $\bar{X}$

X' = Expected recovery for one or more measurements of a sample containing a concentration of C, in µg/L.  
 S,' = Expected single analyst standard deviation of measurements at an average concentration found of  $\bar{X}$ , in µg/L.  
 S' = Expected interlaboratory standard deviation of measurements at an average concentration found of  $\bar{X}$ , in µg/L.  
 C = True value for the concentration, in µg/L.  
 $\bar{X}$  = Average recovery found for measurements of samples containing a concentration of C, in µg/L.  
<sup>a</sup>Estimates based upon the performance in a single laboratory (References 4 and 16).  
<sup>b</sup>Due to coelutions, performance statements for these isomers are based upon the sums of their concentrations.

19. Glossary

These definitions and purposes are specific to this method, but have been conformed to common usage to the extent possible.

19.1 Units of weight and measure and their abbreviations.

- 19.1.1 Symbols.
- °C degrees Celsius
- µg microgram
- µL microliter
- < less than
- > greater than
- % percent

19.1.2 Abbreviations (in alphabetical order).

- cm centimeter
- g gram
- h hour
- ID inside diameter
- in. inch
- L liter
- m mass
- mg milligram
- min minute
- mL milliliter
- mm millimeter
- ms millisecond
- m/z mass-to-charge ratio
- N normal; gram molecular weight of solute divided by hydrogen equivalent of solute, per liter of solution
- ng nanogram
- pg picogram
- ppb part-per-billion
- ppm part-per-million
- ppt part-per-trillion
- psig pounds-per-square inch gauge
- v/v volume per unit volume
- w/v weight per unit volume
- 19.2 Definitions and acronyms (in alphabetical order).

Analyte—A compound tested for by this method. The analytes are listed in Tables 1 and 2.

Analyte of interest—An analyte of interest is an analyte required to be determined by a regulatory/control authority or in a permit, or by a client.

Analytical batch—The set of samples analyzed on a given instrument during a 12-hour period that begins with analysis of a calibration verification/LCS. See section 8.4.

Blank—An aliquot of reagent water that is treated exactly as a sample including exposure to all glassware, equipment, solvents, reagents, internal standards, and surrogates that are used with samples. The blank is used to determine if analytes or interferences are present in the laboratory environment, the reagents, or the apparatus. See section 8.5.

Calibration—The process of determining the relationship between the output or response of a measuring instrument and the value of an input standard. Historically, EPA has referred to a multi-point calibration as the “initial calibration,” to differentiate it from a single-point calibration verification.

Calibration standard—A solution prepared from stock solutions and/or a secondary standards and containing the analytes of interest, surrogates, and internal standards. The calibration standard is used to calibrate the response of the GC/MS instrument against analyte concentration.

Calibration verification standard—The laboratory control sample (LCS) used to verify calibration. See Section 8.4.

Descriptor—In SIM, the beginning and ending retention times for the RT window, the m/z's sampled in the RT window, and the dwell time at each m/z.

Extracted ion current profile (EICP)—The line described by the signal at a given m/z.

Field duplicates—Two samples collected at the same time and place under identical conditions, and treated identically throughout field and laboratory procedures. Results of analyses of field duplicates provide an estimate of the precision associated with sample collection, preservation, and storage, as well as with laboratory procedures.

Field blank—An aliquot of reagent water or other reference matrix that is placed in a sample container in the field, and treated as a sample in all respects, including exposure to sampling site conditions, storage, preservation, and all analytical procedures. The purpose of the field blank is to determine if the field or sample transporting procedures and environments have contaminated the sample.

GC—Gas chromatograph or gas chromatography.

Internal standard—A compound added to a sample in a known amount and used as a reference for quantitation of the analytes of interest and surrogates. Internal standards are listed in Table 5. Also see Internal standard quantitation.

Internal standard quantitation—A means of determining the concentration of an analyte of interest (Tables 1 and 2) by reference to a compound added to a sample and not expected to be found in the sample.

DOC—Initial demonstration of capability (DOC; section 8.2); four aliquots of reagent water spiked with the analytes of interest and analyzed to establish the ability of the laboratory to generate acceptable precision and recovery. A DOC is performed prior to the first time this method is used and any time the method or instrumentation is modified.

Laboratory control sample (LCS; laboratory fortified blank (LFB); on-going precision and

recovery sample; OPR)—An aliquot of reagent water spiked with known quantities of the analytes of interest and surrogates. The LCS is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery. In this method, the LCS is synonymous with a calibration verification sample (See sections 7.4 and 8.4).

Laboratory fortified sample matrix—See Matrix spike.

Laboratory reagent blank—See Blank.

Matrix spike (MS) and matrix spike duplicate (MSD) (laboratory fortified sample matrix and duplicate)—Two aliquots of an environmental sample to which known quantities of the analytes of interest and surrogates are added in the laboratory. The MS/MSD are prepared and analyzed exactly like a field sample. Their purpose is to quantify any additional bias and imprecision caused by the sample matrix. The background concentrations of the analytes in the sample matrix must be determined in a separate aliquot and the measured values in the MS/MSD corrected for background concentrations.

May—This action, activity, or procedural step is neither required nor prohibited.

May not—This action, activity, or procedural step is prohibited.

Method blank (laboratory reagent blank)—See Blank.

Method detection limit (MDL)—A detection limit determined by the procedure at 40 CFR part 136, appendix B. The MDLs determined by EPA in the original version of the method are listed in Table 1. As noted in Sec. 1.4, use the MDLs in Table 1 in conjunction with current MDL data from the laboratory actually analyzing samples to assess the sensitivity of this procedure relative to project objectives and regulatory requirements (where applicable).

Minimum level (ML)—The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level.”

MS—Mass spectrometer or mass spectrometry.

Must—This action, activity, or procedural step is required.

$m/z$ —The ratio of the mass of an ion ( $m$ ) detected in the mass spectrometer to the charge ( $z$ ) of that ion.

Quality control sample (QCS)—A sample containing analytes of interest at known concentrations. The QCS is obtained from a source external to the laboratory or is prepared from standards obtained from a different source than the calibration standards.

The purpose is to check laboratory performance using test materials that have been prepared independent of the normal preparation process.

Reagent water—Water demonstrated to be free from the analytes of interest and potentially interfering substances at the MDLs for the analytes in this method.

Regulatory compliance limit (or regulatory concentration limit)—A limit on the concentration or amount of a pollutant or contaminant specified in a nationwide standard, in a permit, or otherwise established by a regulatory/control authority.

Relative retention time (RRT)—The ratio of the retention time of an analyte to the retention time of its associated internal standard. RRT compensates for small changes in the GC temperature program that can affect the absolute retention times of the analyte and internal standard. RRT is a unitless quantity.

Relative standard deviation (RSD)—The standard deviation times 100 divided by the mean. Also termed “coefficient of variation.”

RF—Response factor. See section 7.3.3.

RSD—See relative standard deviation.

Safety Data Sheet (SDS)—Written information on a chemical’s toxicity, health hazards, physical properties, fire, and reactivity, including storage, spill, and handling precautions that meet the requirements of OSHA, 29 CFR 1910.1200(g) and appendix D to § 1910.1200. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.

Selected Ion Monitoring (SIM)—An MS technique in which a few  $m/z$ ’s are monitored. When used with gas chromatography, the  $m/z$ ’s monitored are usually changed periodically throughout the chromatographic run to correlate with the characteristic  $m/z$ ’s for the analytes, surrogates, and internal standards as they elute from the chromatographic column. The technique is often used to increase sensitivity and minimize interferences.

Signal-to-noise ratio (S/N)—The height of the signal as measured from the mean (average) of the noise to the peak maximum divided by the width of the noise.

SIM—See Selection Ion Monitoring.

Should—This action, activity, or procedural step is suggested but not required.

Stock solution—A solution containing an analyte that is prepared using a reference material traceable to EPA, the National Institute of Science and Technology (NIST), or a source that will attest to the purity and authenticity of the reference material.

Surrogate—A compound unlikely to be found in a sample, and which is spiked into sample in a known amount before purge-and-trap. The surrogate is quantitated with the same procedures used to quantitate the analytes of interest. The purpose of the surrogate is to monitor method performance with each sample.

VOA—Volatile organic analysis: *e.g.*, the analysis performed by this method.

*Method 625.1—Base/Neutrals and Acids by GC/MS*

### 1. Scope and Application

1.1 This method is for determination of semivolatile organic pollutants in industrial discharges and other environmental samples by gas chromatography combined with mass spectrometry (GC/MS), as provided under 40 CFR 136.1. This revision is based on a previous protocol (Reference 1), on the basic revision promulgated October 26, 1984, and on an interlaboratory method validation study (Reference 2). Although this method was validated through an interlaboratory study conducted in the early 1980s, the fundamental chemistry principles used in this method remain sound and continue to apply.

1.2 The analytes that may be qualitatively and quantitatively determined using this method and their CAS Registry numbers are listed in Tables 1 and 2. The method may be extended to determine the analytes listed in Table 3; however, extraction or gas chromatography of some of these analytes may make quantitative determination difficult. For example, benzidine is subject to oxidative losses during extraction and/or solvent concentration. Under the alkaline conditions of the extraction, *alpha*-BHC, *gamma*-BHC, endosulfan I and II, and endrin are subject to decomposition. Hexachlorocyclopentadiene is subject to thermal decomposition in the inlet of the gas chromatograph, chemical reaction in acetone solution, and photochemical decomposition. N-nitrosodiphenylamine and other nitrosoamines may decompose in the gas chromatographic inlet. The sample may be extracted at neutral pH if necessary to overcome these or other decomposition problems that could occur at alkaline or acidic pH. EPA also has provided other methods (*e.g.*, Method 607—Nitrosamines) that may be used for determination of some of these analytes. EPA encourages use of Method 625.1 to determine additional compounds amenable to extraction and GC/MS.

1.3 The large number of analytes in Tables 1–3 of this method makes testing difficult if all analytes are determined simultaneously. Therefore, it is necessary to determine and perform quality control (QC) tests for the “analytes of interest” only. Analytes of interest are those required to be determined by a regulatory/control authority or in a permit, or by a client. If a list of analytes is not specified, the analytes in Tables 1 and 2 must be determined, at a minimum, and QC testing must be performed for these analytes. The analytes in Tables 1 and 2, and some of the analytes in Table 3 have been identified as Toxic Pollutants (40 CFR 401.15), expanded to a list of Priority Pollutants (40 CFR part 423, appendix A).

1.4 In this revision to Method 625, the pesticides and polychlorinated biphenyls (PCBs) have been moved from Table 1 to Table 3 (Additional Analytes) to distinguish these analytes from the analytes required in quality control tests (Tables 1 and 2). QC acceptance criteria for pesticides and PCBs have been retained in Table 6 and may continue to be applied if desired, or if requested or required by a regulatory/control

authority or in a permit. Method 608.3 should be used for determination of pesticides and PCBs. However, if pesticides and/or PCBs are to be determined, an additional sample must be collected and extracted using the pH adjustment and extraction procedures specified in Method 608.3. Method 1668C may be useful for determination of PCBs as individual chlorinated biphenyl congeners, and Method 1699 may be useful for determination of pesticides. At the time of writing of this revision, Methods 1668C and 1699 had not been approved for use at 40 CFR part 136. The screening procedure for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD) contained in the version of Method 625 promulgated October 26, 1984 has been replaced with procedures for selected ion monitoring (SIM), and 2,3,7,8-TCDD may be determined using the SIM procedures. However, EPA Method 613 or 1613B should be used for analyte-specific determination of 2,3,7,8-TCDD because of the focus of these methods on this compound. Methods 613 and 1613B are approved for use at 40 CFR part 136.

1.5 Method detection limits (MDLs; Reference 3) for the analytes in Tables 1, 2, and 3 are listed in those tables. These MDLs were determined in reagent water (Reference 4). Advances in analytical technology, particularly the use of capillary (open-tubular) columns, allowed laboratories to routinely achieve MDLs for the analytes in this method that are 2–10 times lower than those in the version promulgated in 1984. The MDL for an analyte in a specific wastewater may differ from those listed, depending upon the nature of interferences in the sample matrix.

1.5.1 EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described in section 15.2 are focused on such monitoring needs and may not be relevant to other uses of the method.

1.5.2 This method includes “reporting limits” based on EPA’s “minimum level” (ML) concept (see the glossary in section 22). Tables 1, 2, and 3 contain MDL values and ML values for many of the analytes.

1.6 This method is performance-based. It may be modified to improve performance (e.g., to overcome interferences or improve the accuracy of results) provided all performance requirements are met.

1.6.1 Examples of allowed method modifications are described at 40 CFR 136.6. Other examples of allowed modifications specific to this method, including solid-phase extraction (SPE) are described in section 8.1.2.

1.6.2 Any modification beyond those expressly permitted at 40 CFR 136.6 or in section 8.1.2 of this method shall be considered a major modification subject to application and approval of an alternate test procedure under 40 CFR 136.4 and 136.5.

1.6.3 For regulatory compliance, any modification must be demonstrated to produce results equivalent or superior to results produced by this method when applied to relevant wastewaters (section 8.3).

1.7 This method is restricted to use by or under the supervision of analysts experienced in the use of a gas chromatograph/mass spectrometer and in the interpretation of mass spectra. Each laboratory that uses this method must demonstrate the ability to generate acceptable results using the procedure in Section 8.2.

1.8 Terms and units of measure used in this method are given in the glossary at the end of the method.

## 2. Summary of Method

2.1 A measured volume of sample, sufficient to meet an MDL or reporting limit, is serially extracted with methylene chloride at pH 11–13 and again at a pH less than 2 using a separatory funnel or continuous liquid/liquid extractor.

2.2 The extract is concentrated to a volume necessary to meet the required compliance or detection limit, and analyzed by GC/MS. Qualitative identification of an analyte in the extract is performed using the retention time and the relative abundance of two or more characteristic masses (*m/z*'s). Quantitative analysis is performed using the internal standard technique with a single characteristic *m/z*.

## 3. Contamination and Interferences

3.1 Solvents, reagents, glassware, and other sample processing labware may yield artifacts, elevated baselines, or matrix interferences causing misinterpretation of chromatograms and mass spectra. All materials used in the analysis must be demonstrated to be free from contamination and interferences by analyzing blanks initially and with each extraction batch (samples started through the extraction process in a given 24-hour period, to a maximum of 20 samples—see Glossary for detailed definition), as described in Section 8.5. Specific selection of reagents and purification of solvents by distillation in all-glass systems may be required. Where possible, labware is cleaned by extraction or solvent rinse, or baking in a kiln or oven.

3.2 Glassware must be scrupulously cleaned (Reference 5). Clean all glassware as soon as possible after use by rinsing with the last solvent used in it. Solvent rinsing should be followed by detergent washing with hot water, and rinses with tap water and reagent water. The glassware should then be drained dry, and heated at 400 °C for 15–30 minutes. Some thermally stable materials, such as PCBs, may require higher temperatures and longer baking times for removal. Solvent rinses with pesticide quality acetone, hexane, or other solvents may be substituted for heating. Do not heat volumetric labware above 90 °C. After drying and cooling, store inverted or capped with solvent-rinsed or baked aluminum foil in a clean environment to prevent accumulation of dust or other contaminants.

3.3 Matrix interferences may be caused by contaminants co-extracted from the sample. The extent of matrix interferences will vary considerably from source to source, depending upon the nature and diversity of the industrial complex or municipality being sampled. Interferences extracted from samples high in total organic carbon (TOC) may result in elevated baselines, or by

enhancing or suppressing a signal at or near the retention time of an analyte of interest. Analyses of the matrix spike and duplicate (section 8.3) may be useful in identifying matrix interferences, and gel permeation chromatography (GPC; Section 11.1) and sulfur removal (section 11.2) may aid in eliminating these interferences. EPA has provided guidance that may aid in overcoming matrix interferences (Reference 6).

3.4 In samples that contain an inordinate number of interferences, the use of chemical ionization (CI) or triple quadrupole (MRM) mass spectrometry may make identification easier. Tables 4 and 5 give characteristic CI and MRM *m/z*'s for many of the analytes covered by this method. The use of CI or MRM mass spectrometry may be utilized to support electron ionization (EI) mass spectrometry or as a primary method for identification and quantification. While the use of these enhanced techniques is encouraged, it is not required.

## 4. Safety

4.1 Hazards associated with each reagent used in this method have not been precisely defined; however, each chemical compound should be treated as a potential health hazard. From this viewpoint, exposure to these chemicals must be reduced to the lowest possible level by whatever means available. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of safety data sheets (SDSs, OSHA, 29 CFR 1910.1200(g)) should also be made available to all personnel involved in sample handling and chemical analysis. Additional references to laboratory safety are available and have been identified (References 7–9) for the information of the analyst.

4.2 The following analytes covered by this method have been tentatively classified as known or suspected human or mammalian carcinogens: Benzo(a)anthracene, benzidine, 3,3'-dichlorobenzidine, benzo(a)pyrene, *alpha*-BHC, *beta*-BHC, *delta*-BHC, *gamma*-BHC, Dibenz(a,h)-anthracene, N-nitrosodimethylamine, 4,4'-DDT, and PCBs. Other compounds in Table 3 may also be toxic. Primary standards of toxic compounds should be prepared in a chemical fume hood, and a NIOSH/MESA approved toxic gas respirator should be worn when handling high concentrations of these compounds.

4.3 This method allows the use of hydrogen as a carrier gas in place of helium (section 5.6.1.2). The laboratory should take the necessary precautions in dealing with hydrogen, and should limit hydrogen flow at the source to prevent buildup of an explosive mixture of hydrogen in air.

## 5. Apparatus and Materials

**Note:** Brand names, suppliers, and part numbers are for illustration purposes only. No endorsement is implied. Equivalent performance may be achieved using equipment and materials other than those specified here. Demonstrating that the equipment and supplies used in the laboratory achieves the required performance is the responsibility of the laboratory.

Suppliers for equipment and materials in this method may be found through an on-line search. Please do not contact EPA for supplier information.

5.1 Sampling equipment, for discrete or composite sampling.

5.1.1 Grab sample bottle—amber glass bottle large enough to contain the necessary sample volume, fitted with a fluoropolymer-lined screw cap. Foil may be substituted for fluoropolymer if the sample is not corrosive. If amber bottles are not available, protect samples from light. Unless pre-cleaned, the bottle and cap liner must be washed, rinsed with acetone or methylene chloride, and dried before use to minimize contamination.

5.1.2 Automatic sampler (optional)—the sampler must incorporate a pre-cleaned glass sample container. Samples must be kept refrigerated at  $\leq 6$  °C and protected from light during compositing. If the sampler uses a peristaltic pump, a minimum length of compressible silicone rubber tubing may be used. Before use, however, rinse the compressible tubing with methanol, followed by repeated rinsing with reagent water, to minimize the potential for sample contamination. An integrating flow meter is required to collect flow-proportioned composites.

5.2 Glassware.

5.2.1 Separatory funnel—Size appropriate to hold sample volume and extraction solvent volume, and equipped with fluoropolymer stopcock.

5.2.2 Drying column—Chromatographic column, approximately 400 mm long by 19 mm ID, with coarse frit, or equivalent, sufficient to hold 15 g of anhydrous sodium sulfate.

5.2.3 Concentrator tube, Kuderna-Danish—10 mL, graduated (Kontes 570050–1025 or equivalent). Calibration must be checked at the volumes employed in the test. A ground glass stopper is used to prevent evaporation of extracts.

5.2.4 Evaporative flask, Kuderna-Danish—500 mL (Kontes 57001–0500 or equivalent). Attach to concentrator tube with springs.

**Note:** Use of a solvent recovery system with the K–D or other solvent evaporation apparatus is strongly recommended.

5.2.5 Snyder column, Kuderna-Danish—Three-ball macro (Kontes 503000–0121 or equivalent).

5.2.6 Snyder column, Kuderna-Danish—Two-ball micro (Kontes 569001–0219 or equivalent).

5.2.7 Vials—10–15 mL, amber glass, with Teflon-lined screw cap.

5.2.8 Continuous liquid-liquid extractor—Equipped with fluoropolymer or glass connecting joints and stopcocks requiring no lubrication. (Hershberg-Wolf Extractor, Ace Glass Company, Vineland, NJ, P/N 6848–20, or equivalent.)

5.2.9 In addition to the glassware listed above, the laboratory should be equipped with all necessary pipets, volumetric flasks, beakers, and other glassware listed in this method and necessary to perform analyses successfully.

5.3 Boiling chips—Approximately 10/40 mesh, glass, silicon carbide, or equivalent. Heat to 400 °C for 30 minutes, or solvent

rinse or Soxhlet extract with methylene chloride.

5.4 Water bath—Heated, with concentric ring cover, capable of temperature control ( $\pm 2$  °C). The bath should be used in a hood.

5.5 Balances.

5.5.1 Analytical, capable of accurately weighing 0.1 mg.

5.5.2 Top loading, capable of accurately weighing 10 mg.

5.6 GC/MS system.

5.6.1 Gas chromatograph (GC)—An analytical system complete with a temperature programmable gas chromatograph and all required accessories, including syringes and analytical columns.

5.6.1.1 Injection port—Can be split, splitless, temperature programmable vaporization split/splitless (PTV), solvent-purge, large-volume, on-column, backflushed, or other. An autosampler is highly recommended because it injects volumes more precisely than volumes injected manually.

5.6.1.2 Carrier gas—Helium or hydrogen. Data in the tables in this method were obtained using helium carrier gas. If hydrogen is used, analytical conditions may need to be adjusted for optimum performance, and calibration and all QC tests must be performed with hydrogen carrier gas. See Section 4.3 for precautions regarding the use of hydrogen as a carrier gas.

5.6.2 GC column—See the footnotes to Tables 4 and 5. Other columns or column systems may be used provided all requirements in this method are met.

5.6.3 Mass spectrometer—Capable of repetitively scanning from 35–450 Daltons (amu) every two seconds or less, utilizing a 70 eV (nominal) electron energy in the electron impact ionization mode, and producing a mass spectrum which meets all the criteria in Table 9A or 9B when 50 ng or less of decafluorotriphenyl phosphine (DFTPP; CAS 5074–71–5; bis(pentafluorophenyl) phenyl phosphine) is injected into the GC.

5.6.4 GC/MS interface—Any GC to MS interface that meets all performance requirements in this method may be used.

5.6.5 Data system—A computer system must be interfaced to the mass spectrometer that allows the continuous acquisition and storage of mass spectra acquired throughout the chromatographic program. The computer must have software that allows searching any GC/MS data file for specific *m/z*'s (masses) and plotting *m/z* abundances versus time or scan number. This type of plot is defined as an extracted ion current profile (EICP). Software must also be available that allows integrating the abundance at any EICP between specified time or scan number limits.

5.7 Automated gel permeation chromatograph (GPC).

5.7.1 GPC column—150–700 mm long  $\times$  21–25 mm ID, packed with 70 g of SX–3 Biobeads; Bio-Rad Labs, or equivalent.

5.7.2 Pump, injection valve, UV detector, and other apparatus necessary to meet the requirements in this method.

5.8 Nitrogen evaporation device—Equipped with a water bath than can be maintained at 30–45 °C; N-Evap, Organomation Associates, or equivalent.

5.9 Muffle furnace or kiln—Capable of baking glassware or sodium sulfate in the range of 400–450 °C.

6. Reagents

6.1 Reagent water—Reagent water is defined as water in which the analytes of interest and interfering compounds are not detected at the MDLs of the analytes of interest.

6.2 Sodium hydroxide solution (10 N)—Dissolve 40 g of NaOH (ACS) in reagent water and dilute to 100 mL.

6.3 Sodium thiosulfate—(ACS) granular.

6.4 Sulfuric acid (1+1)—Slowly add 50 mL of H<sub>2</sub>SO<sub>4</sub> (ACS, sp. gr. 1.84) to 50 mL of reagent water.

6.5 Acetone, methanol, methylene chloride, 2-propanol—High purity pesticide quality, or equivalent, demonstrated to be free of the analytes of interest and interferences (Section 3). Purification of solvents by distillation in all-glass systems may be required.

6.6 Sodium sulfate—(ACS) granular, anhydrous, rinsed or Soxhlet extracted with methylene chloride (20 mL/g), baked in a shallow tray at 450 °C for one hour minimum, cooled in a desiccator, and stored in a pre-cleaned glass bottle with screw cap that prevents moisture from entering.

6.7 Stock standard solutions (1.00  $\mu$ g/ $\mu$ L)—Stock standard solutions may be prepared from pure materials, or purchased as certified solutions. Traceability must be to the National Institute of Standards and Technology (NIST) or other national or international standard, when available. Stock solution concentrations alternate to those below may be used. Because of the toxicity of some of the compounds, primary dilutions should be prepared in a hood, and a NIOSH/MESA approved toxic gas respirator should be worn when high concentrations of neat materials are handled. The following procedure may be used to prepare standards from neat materials.

6.7.1 Prepare stock standard solutions by accurately weighing about 0.0100 g of pure material. Dissolve the material in pesticide quality methanol or other suitable solvent and dilute to volume in a 10-mL volumetric flask. Larger volumes may be used at the convenience of the laboratory. When compound purity is assayed to be 96% or greater, the weight may be used without correction to calculate the concentration of the stock standard. Commercially prepared stock standards may be used at any concentration if they are certified by the manufacturer or by an independent source.

6.7.2 Unless stated otherwise in this method, store non-aqueous standards in fluoropolymer-lined screw-cap, or heat-sealed, glass containers, in the dark at  $-20$  to  $-10$  °C. Store aqueous standards; e.g., the aqueous LCS (section 8.4.1), in the dark at  $\leq 6$  °C, but do not freeze. Standards prepared by the laboratory may be stored for up to one year, except when comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data on file to prove stability for a longer period. Commercially prepared standards may be stored until the expiration date provided by the vendor, except when

comparison with QC check standards indicates that a standard has degraded or become more concentrated due to evaporation, or unless the laboratory has data from the vendor on file to prove stability for a longer period.

#### 6.8 Surrogate standard spiking solution.

6.8.1 Select a minimum of three surrogate compounds from Table 8 that most closely match the recovery of the analytes of interest. For example, if all analytes tested are considered acids, use surrogates that have similar chemical attributes. Other compounds may be used as surrogates so long as they do not interfere in the analysis. If only one or two analytes are determined, one or two surrogates may be used.

6.8.2 Prepare a solution containing each selected surrogate such that the concentration in the sample would match the concentration in the mid-point calibration standard. For example, if the midpoint of the calibration is 100 µg/L, prepare the spiking solution at a concentration of 100 µg/mL in methanol. Addition of 1.00 mL of this solution to 1000 mL of sample will produce a concentration of 100 µg/L of the surrogate. Alternate volumes and concentrations appropriate to the response of the GC/MS instrument or for selective ion monitoring (SIM) may be used, if desired. Store per section 6.7.2.

#### 6.9 Internal standard spiking solution.

6.9.1 Select three or more internal standards similar in chromatographic behavior to the analytes of interest. Internal standards are listed in Table 8. Suggested internal standards are: 1,4-dichlorobenzene-d<sub>4</sub>; naphthalene-d<sub>8</sub>; acenaphthene-d<sub>10</sub>; phenanthrene-d<sub>10</sub>; chrysene-d<sub>12</sub>; and perylene-d<sub>12</sub>. The laboratory must demonstrate that measurement of the internal standards is not affected by method or matrix interferences (see also section 7.3.4).

6.9.2 Prepare the internal standards at a concentration of 10 mg/mL in methylene chloride or other suitable solvent. When 10 µL of this solution is spiked into a 1-mL extract, the concentration of the internal standards will be 100 µg/mL. A lower concentration appropriate to the response of the GC/MS instrument or for SIM may be used, if desired. Store per section 6.7.3.

6.9.3 To assure accurate analyte identification, particularly when SIM is used, it may be advantageous to include more internal standards than those suggested in section 6.9.1. An analyte will be located most accurately if its retention time relative to an internal standard is in the range of 0.8 to 1.2.

6.10 DF TPP standard—Prepare a solution of DF TPP in methanol or other suitable solvent such that 50 ng or less will be injected (see section 13.2). An alternative concentration may be used to compensate for specific injection volumes or to assure that the operating range of the instrument is not exceeded, so long as the total injected is 50 ng or less. Include benzidine and pentachlorophenol in this solution such that ≤100 ng of benzidine and ≤50 ng of pentachlorophenol will be injected.

6.11 Quality control check sample concentrate—See section 8.2.1.

#### 6.12 GPC calibration solution.

6.12.1 Prepare a methylene chloride solution to contain corn oil, bis(2-ethylhexyl)

phthalate (BEHP), perylene, and sulfur at the concentrations in section 6.12.2, or at concentrations appropriate to the response of the detector.

**Note:** Sulfur does not readily dissolve in methylene chloride, but is soluble in warm corn oil. The following procedure is suggested for preparation of the solution.

6.12.2 Weigh 8 mg sulfur and 2.5 g corn oil into a 100-mL volumetric flask and warm to dissolve the sulfur. Separately weigh 100 mg BEHP, 20 mg pentachlorophenol, and 2 mg perylene and add to flask. Bring to volume with methylene chloride and mix thoroughly.

6.12.3 Store the solution in an amber glass bottle with a fluoropolymer-lined screw cap at 0–6 °C. Protect from light. Refrigeration may cause the corn oil to precipitate. Before use, allow the solution to stand at room temperature until the corn oil dissolves, or warm slightly to aid in dissolution. Replace the solution every year, or more frequently if the response of a component changes.

6.13 Sulfur removal—Copper foil or powder (bright, non-oxidized), or tetrabutylammonium sulfite (TBA sulfite).

6.13.1 Copper foil, or powder—Fisher, Alfa Aesar 42455–18, 625 mesh, or equivalent. Cut copper foil into approximately 1-cm squares. Copper must be activated before it may be used, as described below:

6.13.1.1 Place the quantity of copper needed for sulfur removal (section 11.2.1.3) in a ground-glass-stoppered Erlenmeyer flask or bottle. Cover the foil or powder with methanol.

6.13.1.2 Add HCl dropwise (0.5–1.0 mL) while swirling, until the copper brightens.

6.13.1.3 Pour off the methanol/HCl and rinse 3 times with reagent water to remove all traces of acid, then 3 times with acetone, then 3 times with hexane.

6.13.1.4 For copper foil, cover with hexane after the final rinse. Store in a stoppered flask under nitrogen until used. For the powder, dry on a rotary evaporator or under a stream of nitrogen. Store in a stoppered flask under nitrogen until used. Inspect the copper foil or powder before each use. It must have a bright, non-oxidized appearance to be effective. Copper foil or powder that has oxidized may be reactivated using the procedure described above.

6.13.2 Tetrabutylammonium sodium sulfite (TBA sodium sulfite).

6.13.2.1 Tetrabutylammonium hydrogen sulfate, [CH<sub>3</sub>(CH<sub>2</sub>)<sub>3</sub>]<sub>4</sub>NHSO<sub>4</sub>.

6.13.2.2 Sodium sulfite, Na<sub>2</sub>SO<sub>3</sub>.

6.13.2.3 Dissolve approximately 3 g tetrabutylammonium hydrogen sulfate in 100 mL of reagent water in an amber bottle with fluoropolymer-lined screw cap. Extract with three 20-mL portions of hexane and discard the hexane extracts.

6.13.2.4 Add 25 g sodium sulfite to produce a saturated solution. Store at room temperature. Replace after 1 month.

6.14 DDT and endrin decomposition (breakdown) solution—Prepare a solution containing endrin at a concentration of 1 µg/mL and 4,4'-DDT at a concentration of 2 µg/mL, in isooctane or hexane. A 1-µL injection of this standard will contain 1 nanogram (ng)

of endrin and 2 ng of DDT. The concentration of the solution may be adjusted by the laboratory to accommodate other injection volumes such that the same masses of the two analytes are introduced into the instrument.

## 7. Calibration

7.1 Establish operating conditions equivalent to those in the footnote to Table 4 or 5 for the base/neutral or acid fraction, respectively. If a combined base/neutral/acid fraction will be analyzed, use the conditions in the footnote to Table 4. Alternative temperature program and flow rate conditions may be used. It is necessary to calibrate the GC/MS for the analytes of interest (Section 1.3) only.

### 7.2 Internal standard calibration.

7.2.1 Prepare calibration standards for the analytes of interest and surrogates at a minimum of five concentration levels by adding appropriate volumes of one or more stock standards to volumetric flasks. One of the calibration standards should be at a concentration at or below the ML specified in Table 1, 2, or 3, or as specified by a regulatory/control authority or in a permit. The ML value may be rounded to a whole number that is more convenient for preparing the standard, but must not exceed the ML in Table 1, 2, or 3 for those analytes which list ML values. Alternatively, the laboratory may establish a laboratory ML for each analyte based on the concentration in a nominal whole-volume sample that is equivalent to the concentration of the lowest calibration standard in a series of standards produced in the laboratory or obtained from a commercial vendor. The laboratory's ML must not exceed the ML in Table 1, 2, or 3, and the resulting calibration must meet the acceptance criteria in Section 7.2.3, based on the RSD, RSE, or R<sup>2</sup>. The concentrations of the other calibration standards should correspond to the expected range of concentrations found in real samples or should define the working range of the GC/MS system for full-scan and/or SIM operation, as appropriate. A minimum of six concentration levels is required for a second order, non-linear (e.g., quadratic;  $ax^2 + bx + c = 0$ ) calibration (section 7.2.3). Calibrations higher than second order are not allowed. To each calibration standard or standard mixture, add a known constant volume of the internal standard solution (section 6.9), and dilute to volume with methylene chloride.

**Note:** The large number of analytes in Tables 1 through 3 may not be soluble or stable in a single solution; multiple solutions may be required if a large number of analytes are to be determined simultaneously.

7.2.1.1 Prior to analysis of the calibration standards, inject the DF TPP standard (Section 6.10) and adjust the scan rate of the mass spectrometer to produce a minimum of 5 mass spectra across the DF TPP GC peak. Adjust instrument conditions until the DF TPP criteria in Table 9A or 9B are met. Calculate peak tailing factors for benzidine and pentachlorophenol. Calculation of the tailing factor is illustrated in Figure 1. The tailing factor for benzidine and pentachlorophenol must be <2; otherwise, adjust instrument conditions and either

replace the column or break off a short section of the front end of the column, and repeat the test. Once the scan conditions are established, they must be used for analyses of all standards, blanks, and samples.

**Note:** The DFTPP spectrum may be evaluated by summing the intensities of the m/z's across the GC peak, subtracting the background at each m/z in a region of the chromatogram within 20 scans of but not including any part of, the DFTPP peak. The DFTPP spectrum may also be evaluated by fitting a Gaussian to each m/z and using the intensity at the maximum for each Gaussian or by integrating the area at each m/z and using the integrated areas. Other means may be used for evaluation of the DFTPP spectrum so long as the spectrum is not distorted to meet the criteria in Table 9A or 9B.

7.2.1.2 Analyze the mid-point combined base/neutral and acid calibration standard and enter or review the retention time, relative retention time, mass spectrum, and quantitation m/z in the data system for each analyte of interest, surrogate, and internal standard. If additional analytes (Table 3) are

to be quantified, include these analytes in the standard. The mass spectrum for each analyte must be comprised of a minimum of 2 m/z's (Tables 4 and 5); 3 to 5 m/z's assure more reliable analyte identification. Suggested quantitation m/z's are shown in Tables 4 and 5 as the primary m/z. If an interference occurs at the primary m/z, use one of the secondary m/z's or an alternate m/z. A single m/z only is required for quantitation.

7.2.1.3 For SIM operation, determine the analytes in each descriptor, the quantitation m/z for each analyte (the quantitation m/z can be the same as for full-scan operation; section 7.2.1.2), the dwell time on each m/z for each analyte, and the beginning and ending retention time for each descriptor. Analyze the verification standard in scan mode to verify m/z's and establish retention times for the analytes. There must be a minimum of two m/z's for each analyte to assure analyte identification. To maintain sensitivity, the number of m/z's in a descriptor should be limited. For example, for a descriptor with 10 m/z's and a chromatographic peak width of 5 sec, a dwell time of 100 ms at each m/z would result in

a scan time of 1 second and provide 5 scans across the GC peak. The quantitation m/z will usually be the most intense peak in the mass spectrum. The quantitation m/z and dwell time may be optimized for each analyte. The acquisition table used for SIM must take into account the mass defect (usually less than 0.2 Dalton) that can occur at each m/z monitored. Refer to the footnotes to Table 4 or 5 for establishing operating conditions and to section 7.2.1.1 for establishing scan conditions.

7.2.1.4 For combined scan and SIM operation, set up the scan segments and descriptors to meet requirements in sections 7.2.1.1–7.2.1.3. Analyze unfamiliar samples in the scan mode to assure that the analytes of interest are determined.

7.2.2 Analyze each calibration standard according to section 12 and tabulate the area at the quantitation m/z against concentration for each analyte of interest, surrogate, and internal standard. If an interference is encountered, use a secondary m/z (Table 4 or 5) for quantitation. Calculate a response factor (RF) for each analyte of interest at each concentration using Equation 1.

$$RF = \frac{(A_s \times C_{is})}{(A_{is} \times C_s)} \quad \text{Equation 1}$$

where:

$A_s$  = Area of the characteristic m/z for the analyte of interest or surrogate.

$A_{is}$  = Area of the characteristic m/z for the internal standard.

$C_{is}$  = Concentration of the internal standard ( $\mu\text{g/mL}$ ).

$C_s$  = Concentration of the analyte of interest or surrogate ( $\mu\text{g/mL}$ ).

7.2. Calculate the mean (average) and relative standard deviation (RSD) of the responses factors. If the RSD is less than 35%, the RF can be assumed to be invariant and the average RF can be used for calculations. Alternatively, the results can be used to fit a linear or quadratic regression of response ratios,  $A_s/A_{is}$ , vs. concentration ratios  $C_s/C_{is}$ . If used, the regression must be weighted inversely proportional to concentration. The coefficient of determination ( $R^2$ ; Reference 10) of the weighted regression must be greater than 0.920 (this value roughly corresponds to the RSD limit of 35%). Alternatively, the relative standard error (Reference 11) may be used as an acceptance criterion. As with the RSD, the RSE must be less than 35%. If an RSE less than 35% cannot be achieved for a quadratic regression, system performance is unacceptable and the system must be adjusted and re-calibrated.

**Note:** Using capillary columns and current instrumentation, it is quite likely that a laboratory can calibrate the target analytes in this method and achieve a linearity metric (either RSD or RSE) well below 35%. Therefore, laboratories are permitted to use more stringent acceptance criteria for calibration than described here, for example, to harmonize their application of this method with those from other sources.

7.3 Calibration verification—The RF or calibration curve must be verified immediately after calibration and at the beginning of each 12-hour shift, by analysis of a standard at or near the concentration of the mid-point calibration standard (section 7.2.1). The standard(s) must be obtained from a second manufacturer or a manufacturer's batch prepared independently from the batch used for calibration. Traceability must be to a national standard, when available. Include the surrogates (section 6.8) in this solution. It is necessary to verify calibration for the analytes of interest (section 1.3) only.

**Note:** The 12-hour shift begins after the DFTPP (section 13.1) and DDT/endrin tests (if DDT and endrin are to be determined), and after analysis of the calibration verification standard. The 12-hour shift ends 12 hours later. The DFTPP, DDT/endrin, and calibration verification tests are outside of the 12-hour shift.

7.3.1 Analyze the calibration verification standard(s) beginning in section 12. Calculate the percent recovery of each analyte. Compare the recoveries for the analytes of interest against the acceptance criteria for recovery (Q) in Table 6, and the recoveries for the surrogates against the acceptance criteria in Table 8. If recovery of the analytes of interest and surrogates meet acceptance criteria, system performance is acceptable and analysis of samples may continue. If any individual recovery is outside its limit, system performance is unacceptable for that analyte.

**Note:** The large number of analytes in Tables 6 and 8 present a substantial probability that one or more will fail acceptance criteria when all analytes are tested simultaneously.

7.3.2 When one or more analytes fail acceptance criteria, analyze a second aliquot of the calibration verification standard and compare ONLY those analytes that failed the first test (section 7.3.1) with their respective acceptance criteria. If these analytes now pass, system performance is acceptable and analysis of samples may continue. A repeat failure of any analyte that failed the first test, however, will confirm a general problem with the measurement system. If this occurs, repair the system (section 7.2.1.1) and repeat the test (section 7.3.1), or prepare a fresh calibration standard and repeat the test. If calibration cannot be verified after maintenance or injection of the fresh calibration standard, re-calibrate the instrument.

**Note:** If it is necessary to perform a repeat verification test frequently; *i.e.*, perform two tests in order to pass, it may be prudent to perform two injections in succession and review the results, rather than perform one injection, review the results, then perform the second injection if results from the first injection fail. To maintain the validity of the test and re-test, system maintenance and/or adjustment is not permitted between the injections.

7.3.3 Many of the analytes in Table 3 do not have QC acceptance criteria in Table 6, and some of the surrogates in Table 8 do not have acceptance criteria. If calibration is to be verified and other QC tests are to be performed for these analytes, acceptance criteria must be developed and applied. EPA has provided guidance for development of QC acceptance criteria (References 12 and 13). Alternatively, analytes that do not have acceptance criteria in Table 6 or Table 8 may

be based on laboratory control charts, or 60 to 140% may be used.

7.3.4 Internal standard responses—Verify that detector sensitivity has not changed by comparing the response of each internal standard in the calibration verification standard (section 7.3) to the response of the respective internal standard in the midpoint calibration standard (section 7.2.1). The peak areas or heights of the internal standards in the calibration verification standard must be within 50% to 200% (1/2 to 2x) of their respective peak areas or heights in the midpoint calibration standard. If not, repeat the calibration verification test using a fresh calibration verification standard (7.3), or perform and document system repair. Subsequent to repair, repeat the calibration verification test (section 7.3.1). If the responses are still not within 50% to 200%, re-calibrate the instrument (section 7.2.2) and repeat the calibration verification test.

## 8. Quality Control

8.1 Each laboratory that uses this method is required to operate a formal quality assurance program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and ongoing analysis of spiked samples and blanks to evaluate and document data quality (40 CFR 136.7). The laboratory must maintain records to document the quality of data generated. Results of ongoing performance tests are compared with established QC acceptance criteria to determine if the results of analyses meet performance requirements of this method. When results of spiked samples do not meet the QC acceptance criteria in this method, a quality control check sample (laboratory control sample; LCS) must be analyzed to confirm that the measurements were performed in an in-control mode of operation. A laboratory may develop its own performance criteria (as QC acceptance criteria), provided such criteria are as or more restrictive than the criteria in this method.

8.1.1 The laboratory must make an initial demonstration of capability (DOC) to generate acceptable precision and recovery with this method. This demonstration is detailed in Section 8.2.

8.1.2 In recognition of advances that are occurring in analytical technology, and to overcome matrix interferences, the laboratory is permitted certain options (section 1.6 and 40 CFR 136.6(b)) to improve separations or lower the costs of measurements. These options may include alternate extraction, concentration, and cleanup procedures (e.g., solid-phase extraction; rotary-evaporator concentration; column chromatography cleanup); changes in column and type of mass spectrometer (40 CFR 136.6(b)(4)(xvi)). Alternate determinative techniques, such as substitution of spectroscopic or immunoassay techniques, and changes that degrade method performance, are not allowed. If an analytical technique other than GC/MS is used, that technique must have a specificity equal to or greater than the specificity of GC/MS for the analytes of interest. The laboratory is also encouraged to participate in inter-comparison and performance evaluation studies (see section 8.10).

8.1.2.1 Each time a modification is made to this method, the laboratory is required to repeat the procedure in section 8.2. If the detection limit of the method will be affected by the change, the laboratory must demonstrate that the MDLs (40 CFR part 136, appendix B) are lower than one-third the regulatory compliance limit or the MDLs in this method, whichever are greater. If calibration will be affected by the change, the instrument must be recalibrated per section 7. Once the modification is demonstrated to produce results equivalent or superior to results produced by this method, that modification may be used routinely thereafter, so long as the other requirements in this method are met (e.g., matrix spike/matrix spike duplicate recovery and relative percent difference).

8.1.2.1.1 If SPE, or another allowed method modification, is to be applied to a specific discharge, the laboratory must prepare and analyze matrix spike/matrix spike duplicate (MS/MSD) samples (section 8.3) and LCS samples (section 8.4). The laboratory must include surrogates (section 8.7) in each of the samples. The MS/MSD and LCS samples must be fortified with the analytes of interest (Section 1.3). If the modification is for nationwide use, MS/MSD samples must be prepared from a minimum of nine different discharges (See section 8.1.2.1.2), and all QC acceptance criteria in this method must be met. This evaluation only needs to be performed once other than for the routine QC required by this method (for example it could be performed by the vendor of the SPE materials) but any laboratory using that specific material must have the results of the study available. This includes a full data package with the raw data that will allow an independent reviewer to verify each determination and calculation performed by the laboratory (see section 8.1.2.2.5, items (a)–(q)).

8.1.2.1.2 Sample matrices on which MS/MSD tests must be performed for nationwide use of an allowed modification:

- (a) Effluent from a POTW.
- (b) ASTM D5905 Standard Specification for Substitute Wastewater.
- (c) Sewage sludge, if sewage sludge will be in the permit.
- (d) ASTM D1141 Standard Specification for Substitute Ocean Water, if ocean water will be in the permit.

(e) Untreated and treated wastewaters up to a total of nine matrix types (see <https://www.epa.gov/eg/industrial-effluent-guidelines> for a list of industrial categories with existing effluent guidelines).

(i) At least one of the above wastewater matrix types must have at least one of the following characteristics:

- (A) Total suspended solids greater than 40 mg/L.
- (B) Total dissolved solids greater than 100 mg/L.
- (C) Oil and grease greater than 20 mg/L.
- (D) NaCl greater than 120 mg/L.
- (E) CaCO<sub>3</sub> greater than 140 mg/L.

(ii) Results of MS/MSD tests must meet QC acceptance criteria in Section 8.3.

(f) A proficiency testing (PT) sample from a recognized provider, in addition to tests of the nine matrices (section 8.1.2.1.1).

8.1.2.2 The laboratory is required to maintain records of modifications made to this method. These records include the following, at a minimum:

8.1.2.2.1 The names, titles, and business street addresses, telephone numbers, and email addresses, of the analyst(s) that performed the analyses and modification, and of the quality control officer that witnessed and will verify the analyses and modifications.

8.1.2.2.2 A list of analytes, by name and CAS Registry Number.

8.1.2.2.3 A narrative stating reason(s) for the modifications.

8.1.2.2.4 Results from all quality control (QC) tests comparing the modified method to this method, including:

- (a) Calibration (section 7).
- (b) Calibration verification (section 7).
- (c) Initial demonstration of capability (section 8.2).
- (d) Analysis of blanks (section 8.5).
- (e) Matrix spike/matrix spike duplicate analysis (section 8.3).

(f) Laboratory control sample analysis (section 8.4).

8.1.2.2.5 Data that will allow an independent reviewer to validate each determination by tracing the instrument output (peak height, area, or other signal) to the final result. These data are to include:

- (a) Sample numbers and other identifiers.
- (b) Extraction dates.
- (c) Analysis dates and times.
- (d) Analysis sequence/run chronology.
- (e) Sample weight or volume (section 10).
- (f) Extract volume prior to each cleanup step (sections 10 and 11).
- (g) Extract volume after each cleanup step (section 11).
- (h) Final extract volume prior to injection (sections 10 and 12).
- (i) Injection volume (section 12.2.3).
- (j) Sample or extract dilution (section 12.2.3.2).
- (k) Instrument and operating conditions.
- (l) Column (dimensions, material, etc).
- (m) Operating conditions (temperature program, flow rate, etc).
- (n) Detector (type, operating conditions, etc).

(o) Chromatograms, mass spectra, and other recordings of raw data.

(p) Quantitation reports, data system outputs, and other data to link the raw data to the results reported.

(q) A written Standard Operating Procedure (SOP).

8.1.2.2.6 Each individual laboratory wishing to use a given modification must perform the start-up tests in section 8.1.2 (e.g., DOC, MDL), with the modification as an integral part of this method prior to applying the modification to specific discharges. Results of the DOC must meet the QC acceptance criteria in Table 6 for the analytes of interest (section 1.3), and the MDLs must be equal to or lower than the MDLs in Tables 1, 2, or 3 for the analytes of interest.

8.1.3 Before analyzing samples, the laboratory must analyze a blank to demonstrate that interferences from the analytical system, labware, and reagents are under control. Each time a batch of samples is extracted or reagents are changed, a blank

must be extracted and analyzed as a safeguard against laboratory contamination. Requirements for the blank are given in section 8.5.

8.1.4 The laboratory must, on an ongoing basis, spike and analyze to monitor and evaluate method and laboratory performance on the sample matrix. The procedure for spiking and analysis is given in section 8.3.

8.1.5 The laboratory must, on an ongoing basis, demonstrate through analysis of a quality control check sample (laboratory control sample, LCS; on-going precision and recovery sample, OPR) that the measurement system is in control. This procedure is given in section 8.4.

8.1.6 The laboratory must maintain performance records to document the quality of data that is generated. This procedure is given in section 8.9.

8.1.7 The large number of analytes tested in performance tests in this method present a substantial probability that one or more will fail acceptance criteria when many analytes are tested simultaneously, and a re-test is allowed if this situation should occur. If, however, continued re-testing results in further repeated failures, the laboratory must document and report the failures (e.g., as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority. Results associated with a QC failure for an analyte regulated in a discharge cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results.

8.2 Initial demonstration of capability (DOC)—To establish the ability to generate acceptable recovery and precision, the laboratory must perform the DOC in sections 8.2.1 through 8.2.6 for the analytes of interest. The laboratory must also establish MDLs for the analytes of interest using the MDL procedure at 40 CFR part 136, appendix B. The laboratory's MDLs must be equal to or lower than those listed in Tables 1, 2, or 3 or lower than one third the regulatory compliance limit, whichever is greater. For MDLs not listed in Tables 4 and 5, the laboratory must determine the MDLs using the MDL procedure at 40 CFR part 136, appendix B under the same conditions used to determine the MDLs for the analytes listed in Tables 1, 2, and 3. All procedures used in the analysis, including cleanup procedures, must be included in the DOC.

8.2.1 For the DOC, a QC check sample concentrate (LCS concentrate) containing each analyte of interest (section 1.3) is prepared in a water-miscible solvent. The QC check sample concentrate must be prepared independently from those used for calibration, but may be from the same source as the second-source standard used for calibration verification (Section 7.3). The concentrate should produce concentrations of the analytes of interest in water at the midpoint of the calibration range, and may be at the same concentration as the LCS (section 8.4). Multiple solutions may be required.

**Note:** QC check sample concentrates are no longer available from EPA.

8.2.2 Using a pipet or micro-syringe, prepare four LCSs by adding an appropriate volume of the concentrate to each of four

aliquots of reagent water, and mix well. The volume of reagent water must be the same as the volume that will be used for the sample, blank (section 8.5), and MS/MSD (section 8.3). A volume of 1-L and a concentration of 100 µg/L were used to develop the QC acceptance criteria in Table 6. Also add an aliquot of the surrogate spiking solution (section 6.8) to the reagent-water aliquots.

8.2.3 Extract and analyze the four LCSs according to the method beginning in Section 10.

8.2.4 Calculate the average percent recovery ( $\bar{X}$ ) and the standard deviation of the percent recovery (s) for each analyte using the four results.

8.2.5 For each analyte, compare s and ( $\bar{X}$ ) with the corresponding acceptance criteria for precision and recovery in Table 6. For analytes in Table 3 not listed in Table 6, DOC QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 12 and 13). Alternatively, acceptance criteria for analytes not listed in Table 6 may be based on laboratory control charts. If s and ( $\bar{X}$ ) for all analytes of interest meet the acceptance criteria, system performance is acceptable and analysis of blanks and samples may begin. If any individual s exceeds the precision limit or any individual ( $\bar{X}$ ) falls outside the range for recovery, system performance is unacceptable for that analyte.

**Note:** The large number of analytes in Tables 1–3 present a substantial probability that one or more will fail at least one of the acceptance criteria when many or all analytes are determined simultaneously. Therefore, the analyst is permitted to conduct a “re-test” as described in section 8.2.6.

8.2.6 When one or more of the analytes tested fail at least one of the acceptance criteria, repeat the test for only the analytes that failed. If results for these analytes pass, system performance is acceptable and analysis of samples and blanks may proceed. If one or more of the analytes again fail, system performance is unacceptable for the analytes that failed the acceptance criteria. Correct the problem and repeat the test (section 8.2). See section 8.1.7 for disposition of repeated failures.

**Note:** To maintain the validity of the test and re-test, system maintenance and/or adjustment is not permitted between this pair of tests.

8.3 Matrix spike and matrix spike duplicate (MS/MSD)—The purpose of the MS/MSD requirement is to provide data that demonstrate the effectiveness of the method as applied to the samples in question by a given laboratory, and both the data user (discharger, permittee, regulated entity, regulatory/control authority, customer, other) and the laboratory share responsibility for provision of such data. The data user should identify the sample and the analytes of interest (section 1.3) to be spiked and provide sufficient sample volume to perform MS/MSD analyses. The laboratory must, on an ongoing basis, spike at least 5% of the samples in duplicate from each discharge being monitored to assess accuracy (recovery and precision). If direction cannot be

obtained from the data user, the laboratory must spike at least one sample in duplicate per extraction batch of up to 20 samples with the analytes in Table 1. Spiked sample results should be reported only to the data user whose sample was spiked, or as requested or required by a regulatory/control authority, or in a permit.

8.3.1 If, as in compliance monitoring, the concentration of a specific analyte will be checked against a regulatory concentration limit, the concentration of the spike should be at that limit; otherwise, the concentration of the spike should be one to five times higher than the background concentration determined in section 8.3.2, at or near the midpoint of the calibration range, or at the concentration in the LCS (section 8.4) whichever concentration would be larger.

8.3.2 Analyze one sample aliquot to determine the background concentration (B) of the each analyte of interest. If necessary, prepare a new check sample concentrate (section 8.2.1) appropriate for the background concentration. Spike and analyze two additional sample aliquots, and determine the concentration after spiking ( $A_1$  and  $A_2$ ) of each analyte. Calculate the percent recoveries ( $P_1$  and  $P_2$ ) as  $100(A_1 - B)/T$  and  $100(A_2 - B)/T$ , where T is the known true value of the spike. Also calculate the relative percent difference (RPD) between the concentrations ( $A_1$  and  $A_2$ ) as  $200|A_1 - A_2|/(A_1 + A_2)$ . If necessary, adjust the concentrations used to calculate the RPD to account for differences in the volumes of the spiked aliquots.

8.3.3 Compare the percent recoveries ( $P_1$  and  $P_2$ ) and the RPD for each analyte in the MS/MSD aliquots with the corresponding QC acceptance criteria in Table 6. A laboratory may develop and apply QC acceptance criteria more restrictive than the criteria in Table 6, if desired.

8.3.3.1 If any individual P falls outside the designated range for recovery in either aliquot, or the RPD limit is exceeded, the result for the analyte in the unspiked sample is suspect. See Section 8.1.7 for disposition of failures.

8.3.3.2 The acceptance criteria in Table 6 were calculated to include an allowance for error in measurement of both the background and spike concentrations, assuming a spike to background ratio of 5:1. This error will be accounted for to the extent that the spike to background ratio approaches 5:1 (Reference 14) and is applied to spike concentrations of 100 µg/L and higher. If spiking is performed at a concentration lower than 100 µg/L, the laboratory must use the QC acceptance criteria in Table 6, the optional QC acceptance criteria calculated for the specific spike concentration in Table 7, or optional in-house criteria (section 8.3.4). To use the acceptance criteria in Table 7: (1) Calculate recovery ( $X'$ ) using the equation in Table 7, substituting the spike concentration (T) for C; (2) Calculate overall precision ( $S'$ ) using the equation in Table 7, substituting  $X'$  for  $\bar{X}$ ; (3) Calculate the range for recovery at the spike concentration as  $(100 X'/T) \pm 2.44(100 S'/T)\%$  (Reference 14). For analytes in Table 3 not listed in Table 6, QC acceptance criteria must be developed by the laboratory. EPA has provided guidance for development of QC acceptance criteria (References 12 and

13). Alternatively, acceptance criteria may be based on laboratory control charts.

8.3.4 After analysis of a minimum of 20 MS/MSD samples for each target analyte and surrogate, and if the laboratory chooses to develop and apply the optional in-house QC limits (Section 8.3.3), the laboratory should calculate and apply the optional in-house QC limits for recovery and RPD of future MS/MSD samples (Section 8.3). The QC limits for recovery are calculated as the mean observed recovery  $\pm 3$  standard deviations, and the upper QC limit for RPD is calculated as the mean RPD plus 3 standard deviations of the RPDs. The in-house QC limits must be updated at least every two years and re-established after any major change in the analytical instrumentation or process. If in-house QC limits are developed, at least 80% of the analytes tested in the MS/MSD must have in-house QC acceptance criteria that are tighter than those in Table 6, and the remaining analytes (those other than the analytes included in the 80%) must meet the acceptance criteria in Table 6. If an in-house QC limit for the RPD is greater than the limit in Table 6, then the limit in Table 6 must be used. Similarly, if an in-house lower limit for recovery is below the lower limit in Table 6, then the lower limit in Table 6 must be used, and if an in-house upper limit for recovery is above the upper limit in Table 6, then the upper limit in Table 6 must be used.

8.4 Laboratory control sample (LCS)—A QC check sample (laboratory control sample, LCS; on-going precision and recovery sample, OPR) containing each analyte of interest (Section 1.3) and surrogate must be prepared and analyzed with each extraction batch of up to 20 samples to demonstrate acceptable recovery of the analytes of interest from a clean sample matrix.

8.4.1 Prepare the LCS by adding QC check sample concentrate (section 8.2.1) to reagent water. Include all analytes of interest (section 1.3) in the LCS. The LCS may be the same sample prepared for the DOC (section 8.2.1). The volume of reagent water must be the same as the volume used for the sample, blank (section 8.5), and MS/MSD (Section 8.3). Also add an aliquot of the surrogate spiking solution (section 6.8). The concentration of the analytes in reagent water should be the same as the concentration in the DOC (section 8.2.2).

8.4.2 Analyze the LCS prior to analysis of field samples in the extraction batch. Determine the concentration (A) of each analyte. Calculate the percent recovery (PS) as  $100(A/T)\%$ , where T is the true value of the concentration in the LCS.

8.4.3 Compare the percent recovery (PS) for each analyte with its corresponding QC acceptance criterion in Table 6. For analytes of interest in Table 3 not listed in Table 6, use the QC acceptance criteria developed for the LCS (section 8.4.5), or limits based on laboratory control charts. If the recoveries for all analytes of interest fall within their respective QC acceptance criteria, analysis of blanks and field samples may proceed. If any individual PS falls outside the range, proceed according to section 8.4.4.

**Note:** The large number of analytes in Tables 1–3 present a substantial probability that one or more will fail the acceptance

criteria when all analytes are tested simultaneously. Because a re-test is allowed in event of failure (sections 8.1.7 and 8.4.3), it may be prudent to extract and analyze two LCSs together and evaluate results of the second analysis against the QC acceptance criteria only if an analyte fails the first test.

8.4.4 Repeat the test only for those analytes that failed to meet the acceptance criteria (PS). If these analytes now pass, system performance is acceptable and analysis of blanks and samples may proceed. Repeated failure, however, will confirm a general problem with the measurement system. If this occurs, repeat the test using a fresh LCS (section 8.2.2) or an LCS prepared with a fresh QC check sample concentrate (section 8.2.1), or perform and document system repair. Subsequent to analysis of the LCS prepared with a fresh sample concentrate, or to system repair, repeat the LCS test (section 8.4). If failure of the LCS indicates a systemic problem with samples in the batch, re-extract and re-analyze the samples in the batch. See section 8.1.7 for disposition of repeated failures.

**Note:** To maintain the validity of the test and re-test, system maintenance and/or adjustment is not permitted between the pair of tests.

8.4.5 After analysis of 20 LCS samples, and if the laboratory chooses to develop and apply in-house QC limits, the laboratory should calculate and apply in-house QC limits for recovery to future LCS samples (section 8.4). Limits for recovery in the LCS should be calculated as the mean recovery  $\pm 3$  standard deviations. A minimum of 80% of the analytes tested for in the LCS must have QC acceptance criteria tighter than those in Table 6, and the remaining analytes (those other than the analytes included in the 80%) must meet the acceptance criteria in Table 6. If an in-house lower limit for recovery is lower than the lower limit in Table 6, the lower limit in Table 6 must be used, and if an in-house upper limit for recovery is higher than the upper limit in Table 6, the upper limit in Table 6 must be used. Many of the analytes and surrogates do not contain acceptance criteria. The laboratory should use 60–140% as interim acceptance criteria for recoveries of spiked analytes and surrogates that do not have recovery limits specified in Table 8, and at least 80% of the surrogates must meet the 60–140% interim criteria until in-house LCS and surrogate limits are developed. Alternatively, acceptance criteria for analytes that do not have recovery limits in Table 6 may be based on laboratory control charts. In-house QC acceptance criteria must be updated at least every two years.

8.5 Blank—A blank must be extracted and analyzed with each extraction batch to demonstrate that the reagents and equipment used for preparation and analysis are free from contamination.

8.5.1 Spike the surrogates into the blank. Extract and concentrate the blank using the same procedures and reagents used for the samples, LCS, and MS/MSD in the batch. Analyze the blank immediately after analysis of the LCS (section 8.4) and prior to analysis of the MS/MSD and samples to demonstrate freedom from contamination.

8.5.2 If an analyte of interest is found in the blank: At a concentration greater than the MDL for the analyte, at a concentration greater than one-third the regulatory compliance limit, or at a concentration greater than one-tenth the concentration in a sample in the extraction batch, *whichever is greater*, analysis of samples must be halted, and the problem corrected. If the contamination is traceable to the extraction batch, samples affected by the blank must be re-extracted and the extracts re-analyzed. If, however, continued re-testing results in repeated blank contamination, the laboratory must document and report the failures (*e.g.*, as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority. Results associated with blank contamination for an analyte regulated in a discharge cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results.

8.6 Internal standards responses.

8.6.1 Calibration verification—The responses (GC peak heights or areas) of the internal standards in the calibration verification must be within 50% to 200% ( $1/2$  to  $2x$ ) of their respective responses in the mid-point calibration standard. If they are not, repeat the calibration verification (Section 7.4) test or perform and document system repair. Subsequent to repair, repeat the calibration verification. If the responses are still not within 50% to 200%, re-calibrate the instrument (Section 7) and repeat the calibration verification test.

8.6.2 Samples, blanks, LCSs, and MS/MSDs—The responses (GC peak heights or areas) of each internal standard in each sample, blank, and MS/MSD must be within 50% to 200% ( $1/2$  to  $2x$ ) of its respective response in the LCS for the extraction batch. If, as a group, all internal standards are not within this range, perform and document system repair, repeat the calibration verification (section 8.4), and re-analyze the affected samples. If a single internal standard is not within the 50% to 200% range, use an alternate internal standard for quantitation of the analyte referenced to the affected internal standard. It may be necessary to use the data system to calculate a new response factor from calibration data for the alternate internal standard/analyte pair. If an internal standard fails the 50–200% criteria and no analytes are detected in the sample, ignore the failure or report it if required by the regulatory/control authority.

8.7 Surrogate recoveries—The laboratory must evaluate surrogate recovery data in each sample against its in-house surrogate recovery limits. The laboratory may use 60–140% as interim acceptance criteria for recoveries for surrogates not listed in Table 8. At least 80% of the surrogates must meet the 60–140% interim criteria until in-house limits are developed. Alternatively, surrogate recovery limits may be developed from laboratory control charts, but such limits must be at least as restrictive as those in Table 8. Spike the surrogates into all samples, blanks, LCSs, and MS/MSDs. Compare surrogate recoveries against the QC acceptance criteria in Table 8 and/or those developed in section 7.3.3 or 8.4.5. If any

recovery fails its criteria, attempt to find and correct the cause of the failure. See section 8.1.7 for disposition of failures.

8.8 DDT and endrin decomposition (breakdown)—If DDT and/or endrin are to be analyzed using this method, the DDT/endrin decomposition test in section 13.8 must be performed to reliably quantify these two pesticides.

8.9 As part of the QC program for the laboratory, control charts or statements of accuracy for wastewater samples must be assessed and records maintained (40 CFR 136.7(c)(1)(viii)). After analysis of five or more spiked wastewater samples as in section 8.3, calculate the average percent recovery ( $P_x$ ) and the standard deviation of the percent recovery (sp). Express the accuracy assessment as a percent interval from  $P_x - 2sp$  to  $P_x + 2sp$ . For example, if  $P_x = 90\%$  and  $sp = 10\%$ , the accuracy interval is expressed as 70–110%. Update the accuracy assessment for each analyte on a regular basis (e.g., after each 5–10 new accuracy measurements). If desired, statements of accuracy for laboratory performance, independent of performance on samples, may be developed using LCSs.

8.10 It is recommended that the laboratory adopt additional quality assurance practices for use with this method. The specific practices that are most productive depend upon the needs of the laboratory and the nature of the samples. Field duplicates may be analyzed to assess the precision of environmental measurements. Whenever possible, the laboratory should analyze standard reference materials and participate in relevant performance evaluation studies.

9. Sample Collection, Preservation, and Handling

9.1 Collect samples as grab samples in amber or clear glass bottles, or in refrigerated bottles using automatic sampling equipment. If clear glass is used, protect samples from light. Collect 1-L of ambient waters, effluents, and other aqueous samples. If the sensitivity of the analytical system is sufficient, a smaller volume (e.g., 250 mL), but no less than 100 mL, may be used. Conventional sampling practices (Reference 15) should be followed, except that the bottle must not be pre-rinsed with sample before collection. Automatic sampling equipment must be as free as possible of polyvinyl chloride or other tubing or other potential sources of contamination. If needed, collect additional sample(s) for the MS/MSD (section 8.3).

9.2 Ice or refrigerate samples at  $\leq 6^\circ\text{C}$  from the time of collection until extraction, but do not freeze. If residual chlorine is present, add 80 mg of sodium thiosulfate per liter of sample and mix well. Any method suitable for field use may be employed to test for residual chlorine (Reference 16). Add more sodium sulfate if 80 mg/L is insufficient but do not add excess sodium thiosulfate. If sodium thiosulfate interferes in the determination of the analytes, an alternate preservative (e.g., ascorbic acid or sodium sulfite) may be used. If preservative has been added, shake the sample vigorously for one minute. Maintain the hermetic seal on the sample bottle until time of analysis.

9.3 All samples must be extracted within 7 days of collection and sample extracts must be analyzed within 40 days of extraction.

#### 10. Extraction

10.1 This section contains procedures for separatory funnel liquid-liquid extraction (SFLLE) and continuous liquid-liquid extraction (CLLE). SFLLE is faster, but may not be as effective as CLLE for recovery of polar analytes such as phenol. SFLLE is labor intensive and may result in formation of emulsions that are difficult to break. CLLE is less labor intensive, avoids emulsion formation, but requires more time (18–24 hours) and more hood space, and may require more solvent. The procedures assume base-neutral extraction followed by acid extraction. For some matrices and analytes of interest, improved results may be obtained by acid-neutral extraction followed by base extraction. A single acid or base extraction may also be performed. If an extraction scheme alternate to base-neutral followed by acid extraction is used, all QC tests must be performed and all QC acceptance criteria must be met with that extraction scheme as an integral part of this method. Solid-phase extraction (SPE) may be used provided requirements in section 8.1.2 are met.

10.2 Separatory funnel liquid-liquid extraction (SFLLE) and extract concentration.

10.2.1 The SFLLE procedure below assumes a sample volume of 1 L. When a different sample volume is extracted, adjust the volume of methylene chloride accordingly.

10.2.2 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. Pour the entire sample into the separatory funnel. Pipet the surrogate standard spiking solution (section 6.8) into the separatory funnel. If the sample will be used for the LCS or MS or MSD, pipet the appropriate check sample concentrate (section 8.2.1 or 8.3.2) into the separatory funnel. Mix well. Check the pH of the sample with wide-range pH paper and adjust to pH 11–13 with sodium hydroxide solution.

10.2.3 Add 60 mL of methylene chloride to the sample bottle, seal, and shake for approximately 30 seconds to rinse the inner surface. Transfer the solvent to the separatory funnel and extract the sample by shaking the funnel for two minutes with periodic venting to release excess pressure. Allow the organic layer to separate from the water phase for a minimum of 10 minutes. If the emulsion interface between layers is more than one-third the volume of the solvent layer, the analyst must employ mechanical techniques to complete the phase separation. The optimum technique depends upon the sample, but may include stirring, filtration of the emulsion through glass wool or phase-separation paper, salting, centrifugation, or other physical methods. Collect the methylene chloride extract in a flask. If the emulsion cannot be broken (recovery of <80% of the methylene chloride), transfer the sample, solvent, and emulsion into a continuous extractor and proceed as described in section 10.3.

10.2.4 Add a second 60-mL volume of methylene chloride to the sample bottle and repeat the extraction procedure a second

time, combining the extracts in the Erlenmeyer flask. Perform a third extraction in the same manner.

10.2.5 Adjust the pH of the aqueous phase to less than 2 using sulfuric acid. Serially extract the acidified aqueous phase three times with 60 mL aliquots of methylene chloride. Collect and combine the extracts in a flask in the same manner as the base/neutral extracts.

**Note:** Base/neutral and acid extracts may be combined for concentration and analysis provided all QC tests are performed and all QC acceptance criteria met for the analytes of interest with the combined extract as an integral part of this method, and provided that the analytes of interest are as reliably identified and quantified as when the extracts are analyzed separately. If doubt exists as to whether identification and quantitation will be affected by use of a combined extract, the fractions must be analyzed separately.

10.2.6 For each fraction or the combined fractions, assemble a Kuderna-Danish (K–D) concentrator by attaching a 10-mL concentrator tube to a 500-mL evaporative flask. Other concentration devices or techniques may be used in place of the K–D concentrator so long as the requirements in section 8.2 are met.

10.2.7 For each fraction or the combined fractions, pour the extract through a solvent-rinsed drying column containing about 10 cm of anhydrous sodium sulfate, and collect the extract in the K–D concentrator. Rinse the Erlenmeyer flask and column with 20–30 mL of methylene chloride to complete the quantitative transfer.

10.2.8 Add one or two clean boiling chips and attach a three-ball Snyder column to the evaporative flask for each fraction (section 10.2.7). Pre-wet the Snyder column by adding about 1 mL of methylene chloride to the top. Place the K–D apparatus on a hot water bath (60–65 °C) so that the concentrator tube is partially immersed in the hot water, and the entire lower rounded surface of the flask is bathed with hot vapor. Adjust the vertical position of the apparatus and the water temperature as required to complete the concentration in 15–20 minutes. At the proper rate of distillation, the balls of the column will actively chatter but the chambers will not flood with condensed solvent. When the apparent volume of liquid reaches 1 mL or other determined amount, remove the K–D apparatus from the water bath and allow to drain and cool for at least 10 minutes. Remove the Snyder column and rinse the flask and its lower joint into the concentrator tube with 1–2 mL of methylene chloride. A 5-mL syringe is recommended for this operation. If the sample will be cleaned up, reserve the K–D apparatus for concentration of the cleaned up extract. Adjust the volume to 5 mL with methylene chloride and proceed to section 11 for cleanup; otherwise, further concentrate the extract for GC/MS analysis per section 10.2.9 or 10.2.10.

10.2.9 Micro Kuderna-Danish concentration—Add another one or two clean boiling chips to the concentrator tube for each fraction and attach a two-ball micro-Snyder column. Pre-wet the Snyder column

by adding about 0.5 mL of methylene chloride to the top. Place the K–D apparatus on a hot water bath (60–65 °C) so that the concentrator tube is partially immersed in hot water. Adjust the vertical position of the apparatus and the water temperature as required to complete the concentration in 5–10 minutes. At the proper rate of distillation the balls of the column will actively chatter but the chambers will not flood with condensed solvent. When the apparent volume of liquid reaches about 1 mL or other determined amount, remove the K–D apparatus from the water bath and allow it to drain and cool for at least 10 minutes. Remove the Snyder column and rinse the flask and its lower joint into the concentrator tube with approximately 0.2 mL of or methylene chloride. Adjust the final volume to 1.0 mL or a volume appropriate to the sensitivity desired (*e.g.*, to meet lower MDLs or for selected ion monitoring). Record the volume, stopper the concentrator tube and store refrigerated if further processing will not be performed immediately. If the extracts will be stored longer than two days, they should be transferred to fluoropolymer-lined screw-cap vials and labeled base/neutral or acid fraction as appropriate. Mark the level of the extract on the vial so that solvent loss can be detected.

10.2.10 Nitrogen evaporation and solvent exchange—Extracts may be concentrated for analysis using nitrogen evaporation in place of micro K–D concentration (section 10.2.9). Extracts that have been cleaned up using sulfur removal (section 11.2) and are ready for analysis are exchanged into methylene chloride.

10.2.10.1 Transfer the vial containing the sample extract to the nitrogen evaporation (blowdown) device (section 5.8). Lower the vial into the water bath and begin concentrating. If the more volatile analytes (section 1.2) are to be concentrated, use room temperature for concentration; otherwise, a slightly elevated (*e.g.*, 30–45 °C) may be used. During the solvent evaporation process, keep the solvent level below the water level of the bath and do not allow the extract to become dry. Adjust the flow of nitrogen so that the surface of the solvent is just visibly disturbed. A large vortex in the solvent may cause analyte loss.

10.2.10.2 Extracts to be solvent exchanged—When the volume of the liquid is approximately 200  $\mu$ L, add 2 to 3 mL of methylene chloride and continue concentrating to approximately 100  $\mu$ L. Repeat the addition of solvent and concentrate once more. Adjust the final extract volume to be consistent with the volume extracted and the sensitivity desired.

10.2.10.3 For extracts that have been cleaned up by GPC and that are to be concentrated to a nominal volume of 1 mL, adjust the final volume to compensate the GPC loss. For a 50% GPC loss, concentrate the extract to 1/2000 of the volume extracted. For example, if the volume extracted is 950 mL, adjust the final volume to 0.48 mL. For extracts that have not been cleaned up by GPC and are to be concentrated to a nominal volume of 1.0 mL, adjust the final extract volume to 1/1000 of the volume extracted. For example, if the volume extracted is 950

mL, adjust the final extract volume to 0.95 mL. Alternative means of compensating the loss during GPC are acceptable so long as they produce results as accurate as results produced using the procedure detailed in this Section. An alternative final volume may be used, if desired, and the calculations adjusted accordingly.

**Note:** The difference in the volume fraction for an extract cleaned up by GPC accounts for the loss in GPC cleanup. Also, by preserving the ratio between the volume extracted and the final extract volume, the concentrations and detection limits do not need to be adjusted for differences in the volume extracted and the extract volume.

10.2.11 Transfer the concentrated extract to a vial with fluoropolymer-lined cap. Seal the vial and label with the sample number. Store in the dark at room temperature until ready for GC analysis. If GC analysis will not be performed on the same day, store the vial in the dark at  $\leq 6$  °C. Analyze the extract by GC/MS per the procedure in section 12.

10.2.12 Determine the original sample volume by refilling the sample bottle to the mark and transferring the liquid to an appropriately sized graduated cylinder. For sample volumes on the order of 1000 mL, record the sample volume to the nearest 10 mL; for sample volumes on the order of 100 mL, record the volume to the nearest 1 mL. Sample volumes may also be determined by weighing the container before and after filling to the mark with water.

10.3 Continuous liquid/liquid extraction (CLLE).

**Note:** With CLLE, phenol, 2,4-dimethyl phenol, and some other analytes may be preferentially extracted into the base-neutral fraction. Determine an analyte in the fraction in which it is identified and quantified most reliably. Also, the short-chain phthalate esters (*e.g.*, dimethyl phthalate, diethyl phthalate) and some other compounds may hydrolyze during prolonged exposure to basic conditions required for continuous extraction, resulting in low recovery of these analytes. When these analytes are of interest, their recovery may be improved by performing the acid extraction first.

10.3.1 Use CLLE when experience with a sample from a given source indicates an emulsion problem, or when an emulsion is encountered during SFLLE. CLLE may be used for all samples, if desired.

10.3.2 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. Check the pH of the sample with wide-range pH paper and adjust to pH 11–13 with sodium hydroxide solution. Transfer the sample to the continuous extractor. Pipet surrogate standard spiking solution (section 6.8) into the sample. If the sample will be used for the LCS or MS or MSD, pipet the appropriate check sample concentrate (section 8.2.1 or 8.3.2) into the extractor. Mix well. Add 60 mL of methylene chloride to the sample bottle, seal, and shake for 30 seconds to rinse the inner surface. Transfer the solvent to the extractor.

10.3.3 Repeat the sample bottle rinse with an additional 50–100 mL portion of methylene chloride and add the rinse to the extractor.

10.3.4 Add a suitable volume of methylene chloride to the distilling flask (generally 200–500 mL), add sufficient reagent water to ensure proper operation, and extract for 18–24 hours. A shorter or longer extraction time may be used if all QC acceptance criteria are met. Test and, if necessary, adjust the pH of the water during the second or third hour of the extraction. After extraction, allow the apparatus to cool, then detach the distilling flask. Dry, concentrate, and seal the extract per sections 10.2.6 through 10.2.11. See the note at section 10.2.5 regarding combining extracts of the base/neutral and acid fractions.

10.3.5 Charge the distilling flask with methylene chloride and attach it to the continuous extractor. Carefully, while stirring, adjust the pH of the aqueous phase to less than 2 using sulfuric acid. Extract for 18–24 hours. A shorter or longer extraction time may be used if all QC acceptance criteria are met. Test and, if necessary, adjust the pH of the water during the second or third hour of the extraction. After extraction, allow the apparatus to cool, then detach the distilling flask. Dry, concentrate, and seal the extract per sections 10.2.6 through 10.2.11. Determine the sample volume per section 10.2.12.

## 11. Extract Cleanup

**Note:** Cleanup may not be necessary for relatively clean samples (*e.g.*, treated effluents, groundwater, drinking water). If particular circumstances require the use of a cleanup procedure, the laboratory may use any or all of the procedures below or any other appropriate procedure. Before using a cleanup procedure, the laboratory must demonstrate that the requirements of section 8.1.2 can be met using the cleanup procedure as an integral part of this method.

### 11.1 Gel permeation chromatography (GPC).

#### 11.1.1 Calibration.

11.1.1.1 Load the calibration solution (section 6.12) into the sample loop.

11.1.1.2 Inject the calibration solution and record the signal from the detector. The elution pattern will be corn oil, bis(2-ethylhexyl) phthalate, pentachlorophenol, perylene, and sulfur.

11.1.1.3 Set the “dump time” to allow >85% removal of the corn oil and >85% collection of the phthalate.

11.1.1.4 Set the “collect time” to the peak minimum between perylene and sulfur.

11.1.1.5 Verify calibration with the calibration solution after every 20 or fewer extracts. Calibration is verified if the recovery of the pentachlorophenol is greater than 85%. If calibration is not verified, recalibrate using the calibration solution, and re-extract and clean up the preceding extracts using the calibrated GPC system.

11.1.2 Extract cleanup—GPC requires that the column not be overloaded. The column specified in this method is designed to handle a maximum of 0.5 g of high molecular weight material in a 5-mL extract. If the extract is known or expected to contain more than 0.5 g, the extract is split into fractions for GPC and the fractions are combined after elution from the column. The solids content of the extract may be obtained

gravimetrically by evaporating the solvent from a 50- $\mu$ L aliquot.

11.1.2.1 Filter the extract or load through the filter holder to remove particulates. Load the extract into the sample loop. The maximum capacity of the column is 0.5–1.0 g. If necessary, split the extract into multiple aliquots to prevent column overload.

11.1.2.2 Elute the extract using the calibration data determined in Section 11.1.1. Collect the eluate in the K–D apparatus reserved in section 10.2.8.

11.1.3 Concentrate the cleaned up extract per sections 10.2.8 and 10.2.9 or 10.2.10.

11.1.4 Rinse the sample loading tube thoroughly with methylene chloride between extracts to prepare for the next sample.

11.1.5 If a particularly dirty extract is encountered, run a methylene chloride blank through the system to check for carry-over.

#### 11.2 Sulfur removal.

**Note:** Separate procedures using copper or TBA sulfite are provided in this section for sulfur removal. They may be used separately or in combination, if desired.

11.2.1 Removal with copper (Reference 17).

**Note:** If an additional compound (Table 3) is to be determined; sulfur is to be removed; copper will be used for sulfur removal; and a sulfur matrix is known or suspected to be present, the laboratory must demonstrate that the additional compound can be successfully extracted and treated with copper in the sulfur matrix. Some of the additional compounds (Table 3) are known not to be amenable to sulfur removal with copper (*e.g.* Atrazine and Diazinon).

11.2.1.1 Quantitatively transfer the extract from section 10.2.8 to a 40- to 50-mL flask or bottle. If there is evidence of water in the concentrator tube after the transfer, rinse the tube with small portions of hexane:acetone (40:60) and add to the flask or bottle. Mark and set aside the concentrator tube for use in re-concentrating the extract.

11.2.1.2 Add 10–20 g of granular anhydrous sodium sulfate to the flask. Swirl to dry the extract.

11.2.1.3 Add activated copper (section 6.13.1.4) and allow to stand for 30–60 minutes, swirling occasionally. If the copper does not remain bright, add more and swirl occasionally for another 30–60 minutes.

11.2.1.4 After drying and sulfur removal, quantitatively transfer the extract to a nitrogen-evaporation vial or tube and proceed to section 10.2.10 for nitrogen evaporation and solvent exchange, taking care to leave the sodium sulfate and copper in the flask.

#### 11.2.2 Removal with TBA sulfite.

11.2.2.1 Using small volumes of hexane, quantitatively transfer the extract to a 40- to 50-mL centrifuge tube with fluoropolymer-lined screw cap.

11.2.2.2 Add 1–2 mL of TBA sulfite reagent (section 6.13.2.4), 2–3 mL of 2-propanol, and approximately 0.7 g of sodium sulfite (section 6.13.2.2) crystals to the tube. Cap and shake for 1–2 minutes. If the sample is colorless or if the initial color is

unchanged, and if clear crystals (precipitated sodium sulfite) are observed, sufficient sodium sulfite is present. If the precipitated sodium sulfite disappears, add more crystalline sodium sulfite in approximately 0.5 g portions until a solid residue remains after repeated shaking.

11.2.2.3 Add 5–10 mL of reagent water and shake for 1–2 minutes. Centrifuge to settle the solids.

11.2.2.4 Quantitatively transfer the hexane (top) layer through a small funnel containing a few grams of granular anhydrous sodium sulfate to a nitrogen-evaporation vial or tube and proceed to section 10.2.10 for nitrogen evaporation and solvent exchange.

#### 12. Gas Chromatography/Mass Spectrometry

12.1 Establish the operating conditions in Table 4 or 5 for analysis of a base/neutral or acid extract, respectively. For analysis of a combined extract (section 10.2.5, note), use the operating conditions in Table 4 MDLs and MLs for the analytes are given in Tables 1, 2, and 3. Retention times for many of the analytes are given in Tables 4 and 5. Examples of the separations achieved are shown in Figure 2 for the combined extract. Alternative columns or chromatographic conditions may be used if the requirements of section 8.2 are met. Verify system performance per section 13.

#### 12.2 Analysis of a standard or extract.

12.2.1 Bring the standard or concentrated extract (section 10.2.9 or 10.2.11) to room temperature and verify that any precipitate has redissolved. Verify the level on the extract and bring to the mark with solvent if required.

12.2.2 Add the internal standard solution (section 6.9) to the extract. Mix thoroughly.

12.2.3 Inject an appropriate volume of the sample extract or standard solution using split, splitless, solvent purge, large-volume, or on-column injection. If the sample is injected manually the solvent-flush technique should be used. The injection volume depends upon the technique used and the ability to meet MDLs or reporting limits for regulatory compliance. Injected volumes must be the same for standards and sample extracts. Record the volume injected to two significant figures.

12.2.3.1 Start the GC column oven program upon injection. Start MS data collection after the solvent peak elutes. Stop data collection after benzo(ghi)perylene elutes for the base/neutral or combined fractions, or after pentachlorophenol elutes for the acid fraction. Return the column to the initial temperature for analysis of the next standard solution or extract.

12.2.3.2 If the concentration of any analyte of interest exceeds the calibration range, either extract and analyze a smaller sample volume, or dilute and analyze the diluted extract after bringing the concentrations of the internal standards to the levels in the undiluted extract.

12.2.4 Perform all qualitative and quantitative measurements as described in Sections 14 and 15. When standards and

extracts are not being used for analyses, store them refrigerated at  $\leq 6$  °C protected from light in screw-cap vials equipped with unpierced fluoropolymer-lined septa.

#### 13. Performance Tests

13.1 At the beginning of each 12-hour shift during which standards or extracts will be analyzed, perform the tests in sections 13.2–13.4 to verify system performance. If an extract is concentrated for greater sensitivity (*e.g.*, by SIM), all tests must be performed at levels consistent with the reduced extract volume.

13.2 DFTPP—Inject the DFTPP standard (section 6.10) and verify that the criteria for DFTPP in section 7.2.1.1 and Table 9A (Reference 18) for a quadrupole MS, or Table 9B (Reference 19) for a time-of-flight MS, are met.

13.3 GC resolution—The resolution should be verified on the mid-point concentration of the initial calibration as well as the laboratory designated continuing calibration verification level if closely eluting isomers are to be reported (*e.g.*, benzo(b)fluoranthene and benzo(k)fluoranthene). Sufficient gas chromatographic resolution is achieved if the height of the valley between two isomer peaks is less than 50% of the average of the two peak heights.

13.4 Calibration verification—Verify calibration per sections 7.3 and Table 6.

13.5 Peak tailing—Verify the tailing factor specifications are met per Section 7.2.1.1.

13.6 Laboratory control sample and blank—Analyze the extracts of the LCS and blank at the beginning of analyses of samples in the extraction batch (section 3.1). The LCS must meet the requirements in section 8.4, and the blank must meet the requirements in section 8.5 before sample extracts may be analyzed.

13.7 Analysis of DFTPP, the DDT/Endrin decomposition test (if used), the LCS, and the blank are outside of the 12-hour analysis shift (section 3.1). The total time for DFTPP, DDT/Endrin, the LCS, the blank, and the 12-hour shift must not exceed 15 hours.

13.8 Decomposition of DDT and endrin—If DDT and/or endrin are to be determined, this test must be performed prior to calibration verification (section 13.4). The QC acceptance criteria (section 13.8.3) must be met before analyzing samples for DDE and/or Endrin. DDT decomposes to DDE and DDD. Endrin decomposes to endrin aldehyde and endrin ketone.

13.8.1 Inject 1  $\mu$ L of the DDT and endrin decomposition solution (section 6.14). As noted in section 6.14, other injection volumes may be used as long as the concentrations of DDT and endrin in the solution are adjusted to introduce the masses of the two analytes into the instrument that are listed in section 6.14.

13.8.2 Measure the areas of the peaks for DDT, DDE, DDD, Endrin, Endrin aldehyde, and Endrin ketone. Calculate the percent breakdown as shown in the equations below:

$$\% \text{ breakdown of DDT} = \frac{\text{sum of degradation peak areas (DDD + DDE)}}{\text{sum of all peak areas (DDT + DDE + DDD)}} \times 100$$

% breakdown of Endrin

$$= \frac{\text{sum of degradation peak areas (Endrin aldehyde + Endrin ketone)}}{\text{sum of all peak areas (Endrin + Endrin aldehyde + Endrin ketone)}} \times 100$$

13.8.3 Both the % breakdown of DDT and of Endrin must be less than 20%, otherwise the system is not performing acceptably for DDT and endrin. In this case, repair the GC column system that failed and repeat the performance tests (sections 13.2 to 13.6) until the specification is met.

**Note:** DDT and endrin decomposition are usually caused by accumulation of particulates in the injector and in the front end of the column. Cleaning and silanizing the injection port liner, and breaking off a short section of the front end of the column will usually eliminate the decomposition problem. Either of these corrective actions may affect retention times, GC resolution, and calibration linearity.

14. Qualitative Identification

14.1 Identification is accomplished by comparison of data from analysis of a sample or blank with data stored in the GC/MS data system (sections 5.6.5 and 7.2.1.2). Identification of an analyte is confirmed per sections 14.1.1 through 14.1.4.

14.1.1 The signals for the quantitation and secondary m/z's stored in the data system for each analyte of interest must be present and must maximize within the same two consecutive scans.

14.1.2 The retention time for the analyte should be within ± 10 seconds of the analyte

in the calibration verification run at the beginning of the shift (section 7.3 or 13.4).

**Note:** Retention time windows other than ± 10 seconds may be appropriate depending on the performance of the gas chromatograph or observed retention time drifts due to certain types of matrix effects. Relative retention time (RRT) may be used as an alternative to absolute retention times if retention time drift is a concern. RRT is a unitless quantity (see Sec. 22.2), although some procedures refer to "RRT units" in providing the specification for the agreement between the RRT values in the sample and the calibration verification or other standard. When significant retention time drifts are observed, dilutions or spiked samples may help the analyst determine the effects of the matrix on elution of the target analytes and to assist in qualitative identification.

14.1.3 Either the background corrected EICP areas, or the corrected relative intensities of the mass spectral peaks at the GC peak maximum, must agree within 50% to 200% (1/2 to 2 times) for the quantitation and secondary m/z's in the reference mass spectrum stored in the data system (section 7.2.1.2), or from a reference library. For example, if a peak has an intensity of 20% relative to the base peak, the analyte is identified if the intensity of the peak in the sample is in the range of 10% to 40% of the

base peak. If identification is ambiguous, an experienced spectrometrist (section 1.7) must determine the presence or absence of the compound.

14.2 Structural isomers that produce very similar mass spectra should be identified as individual isomers if they have sufficiently different gas chromatographic retention times. Sufficient gas chromatographic resolution is achieved if the height of the valley between two isomer peaks is less than 50% of the average of the two peak heights. Otherwise, structural isomers are identified as isomeric pairs.

15. Calculations

15.1 When an analyte has been identified, quantitation of that analyte is based on the integrated abundance from the EICP of the primary characteristic m/z in Table 4 or 5. Calculate the concentration in the extract using the response factor (RF) determined in Section 7.2.2 and Equation 2. If the concentration of an analyte exceeds the calibration range, dilute the extract by the minimum amount to bring the concentration into the calibration range, and re-analyze the extract. Determine a dilution factor (DF) from the amount of the dilution. For example, if the extract is diluted by a factor of 2, DF = 2.

$$C_{ex} (\mu\text{g/mL}) = \frac{A_s \times C_{is}}{A_{is} \times RF}$$

Equation 2

where:

C<sub>ex</sub> = Concentration of the analyte in the extract, in µg/mL, and the other terms are as defined in section 7.2.2.

Calculate the concentration of the analyte in the sample using the concentration in the extract, the extract volume, the sample

volume, and the dilution factor, per Equation 3:

$$C_{samp} (\mu\text{g/L}) = \frac{C_{ex} \times V_{ex} \times DF}{V_s}$$

Equation 3

where:

C<sub>samp</sub> = Concentration of the analyte in the sample  
 C<sub>ex</sub> = Concentration of the analyte in the extract, in µg/mL  
 V<sub>ex</sub> = Volume of extract (mL)  
 V<sub>s</sub> = Volume of sample (L)  
 DF = Dilution factor

15.2 Reporting of results. As noted in section 1.4.1, EPA has promulgated this method at 40 CFR part 136 for use in wastewater compliance monitoring under the National Pollutant Discharge Elimination System (NPDES). The data reporting practices described here are focused on such monitoring needs and may not be relevant to other uses of the method.

15.2.1 Report results for wastewater samples in µg/L without correction for recovery. (Other units may be used if required by in a permit.) Report all QC data with the sample results.

15.2.2 Reporting level. Unless specified otherwise by a regulatory authority or in a discharge permit, results for analytes that meet the identification criteria are reported

down to the concentration of the ML established by the laboratory through calibration of the instrument (see section 7.3.2 and the glossary for the derivation of the ML). EPA considers the terms "reporting limit," "quantitation limit," "limit of quantitation," and "minimum level" to be synonymous.

15.2.2.1 Report a result for each analyte in each field sample or QC standard at or above the ML to 3 significant figures. Report a result for each analyte found in each field sample or QC standard below the ML as "ML" where ML is the concentration of the analyte at the ML, or as required by the regulatory/control authority or permit. Report a result for each analyte in a blank at or above the MDL to 2 significant figures. Report a result for each analyte found in a blank below the MDL as "MDL," where MDL is the concentration of the analyte at the MDL, or as required by the regulatory/control authority or permit.

15.2.2.2 In addition to reporting results for samples and blanks separately, the concentration of each analyte in a blank associated with the sample may be subtracted from the result for that sample, but only if requested or required by a regulatory authority or in a permit. In this case, both the sample result and the blank results must be reported together.

15.2.2.3 Report a result for an analyte found in a sample or extract that has been diluted at the least dilute level at which the area at the quantitation  $m/z$  is within the calibration range (*i.e.*, above the ML for the analyte) and the MS/MSD recovery and RPD are within their respective QC acceptance criteria (Table 6). This may require reporting results for some analytes from different analyses.

15.2.3 Results from tests performed with an analytical system that is not in control (*i.e.*, that does not meet acceptance criteria for any QC test in this method) must be documented and reported (*e.g.*, as a qualifier on results), unless the failure is not required to be reported as determined by the regulatory/control authority. Results associated with a QC failure cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results. If the holding time would be exceeded for a re-analysis of the sample, the regulatory/control authority should be consulted for disposition.

## 16. Method Performance

16.1 The basic version of this method was tested by 15 laboratories using reagent water, drinking water, surface water, and industrial wastewaters spiked at six concentrations over the range 5–1300  $\mu\text{g/L}$  (Reference 2). Single operator precision, overall precision, and method accuracy were found to be directly related to the concentration of the analyte and essentially independent of the sample matrix. Linear equations to describe these relationships are presented in Table 7.

16.2 As noted in section 1.1, this method was validated through an interlaboratory study in the early 1980s. However, the fundamental chemistry principles used in this method remain sound and continue to apply.

16.3 A chromatogram of the combined acid/base/neutral calibration standard is shown in Figure 2.

## 17. Pollution Prevention

17.1 Pollution prevention encompasses any technique that reduces or eliminates the quantity or toxicity of waste at the point of generation. Many opportunities for pollution prevention exist in laboratory operations. EPA has established a preferred hierarchy of environmental management techniques that places pollution prevention as the management option of first choice. Whenever feasible, the laboratory should use pollution prevention techniques to address waste generation. When wastes cannot be reduced at the source, the Agency recommends recycling as the next best option.

17.2 The analytes in this method are used in extremely small amounts and pose little threat to the environment when managed properly. Standards should be prepared in volumes consistent with laboratory use to minimize the disposal of excess volumes of expired standards. This method utilizes significant quantities of methylene chloride. Laboratories are encouraged to recover and recycle this and other solvents during extract concentration.

17.3 For information about pollution prevention that may be applied to laboratories and research institutions, consult *Less is Better: Laboratory Chemical Management for Waste Reduction*, available from the American Chemical Society's Department of Governmental Relations and Science Policy, 1155 16th Street NW., Washington DC 20036, 202–872–4477.

## 18. Waste Management

18.1 The laboratory is responsible for complying with all Federal, State, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions, and to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. An overview of requirements can be found in *Environmental Management Guide for Small Laboratories* (EPA 233–B–98–001).

18.2 Samples at  $\text{pH} < 2$ , or  $\text{pH} > 12$ , are hazardous and must be handled and disposed of as hazardous waste, or neutralized and disposed of in accordance with all federal, state, and local regulations. It is the laboratory's responsibility to comply with all federal, state, and local regulations governing waste management, particularly the hazardous waste identification rules and land disposal restrictions. The laboratory using this method has the responsibility to protect the air, water, and land by minimizing and controlling all releases from fume hoods and bench operations. Compliance is also required with any sewage discharge permits and regulations. For further information on waste management, see "*The Waste Management Manual for Laboratory Personnel*," also available from the American Chemical Society at the address in section 17.3.

18.3 Many analytes in this method decompose above 500 °C. Low-level waste

such as absorbent paper, tissues, and plastic gloves may be burned in an appropriate incinerator. Gross quantities of neat or highly concentrated solutions of toxic or hazardous chemicals should be packaged securely and disposed of through commercial or governmental channels that are capable of handling these types of wastes.

18.4 For further information on waste management, consult *The Waste Management Manual for Laboratory Personnel and Less is Better-Laboratory Chemical Management for Waste Reduction*, available from the American Chemical Society's Department of Government Relations and Science Policy, 1155 16th Street NW., Washington, DC 20036, 202–872–4477.

## 19. References

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- 17. “Manual of Analytical Methods for the Analysis of Pesticides in Human and Environmental Samples,” EPA–600/8–80–038, U.S. Environmental Protection Agency, Health Effects Research Laboratory, Research Triangle Park, North Carolina.
- 18. Eichelberger, J.W., Harris, L.E., and Budde, W.L. “Reference Compound to Calibrate Ion Abundance Measurement in Gas Chromatography-Mass Spectrometry,” Analytical Chemistry, 47, 995 (1975).
- 19. Letter of approval of acceptance criteria for DFTPP for time-of-flight mass spectrometers from William A. Telliard and Herb Brass of EPA to Jack Cochran of LECO Corporation, February 9, 2005.
- 20. Tables

TABLE 1—NON PESTICIDE/PCB BASE/NEUTRAL EXTRACTABLES <sup>1</sup>

Analyte	CAS registry	MDL <sup>4</sup> (ug/L)	ML <sup>5</sup> (ug/L)
Acenaphthene	83–32–9	1.9	5.7
Acenaphthylene	208–96–8	3.5	10.5
Anthracene	120–12–7	1.9	5.7
Benzidine <sup>2</sup>	92–87–5	44	132
Benzo(a)anthracene	56–55–3	7.8	23.4
Benzo(a)pyrene	50–32–8	2.5	7.5
Benzo(b)fluoranthene	205–99–2	4.8	14.4
Benzo(k)fluoranthene	207–08–9	2.5	7.5
Benzo(ghi)perylene	191–24–2	4.1	12.3
Benzyl butyl phthalate	85–68–7	2.5	7.5
bis(2-Chloroethoxy)methane	111–91–1	5.3	15.9
bis(2-Ethylhexyl)phthalate	117–81–7	2.5	7.5
bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	108–60–1	5.7	17.1
4-Bromophenyl phenyl ether	101–55–3	1.9	5.7
2-Chloronaphthalene	91–58–7	1.9	5.7
4-Chlorophenyl phenyl ether	7005–72–3	4.2	12.6
Chrysene	218–01–9	2.5	7.5
Dibenz(a,h)anthracene	53–70–3	2.5	7.5
Di- <i>n</i> -butylphthalate	84–74–2	2.5	7.5
3,3'-Dichlorobenzidine	91–94–1	16.5	49.5
Diethyl phthalate	84–66–2	1.9	5.7
Dimethyl phthalate	131–11–3	1.6	4.8
2,4-Dinitrotoluene	121–14–2	5.7	17.1
2,6-Dinitrotoluene	606–20–2	1.9	5.7
Di- <i>n</i> -octylphthalate	117–84–0	2.5	7.5
Fluoranthene	206–44–0	2.2	6.6
Fluorene	86–73–7	1.9	5.7
Hexachlorobenzene	118–74–1	1.9	5.7
Hexachlorobutadiene	87–68–3	0.9	2.7
Hexachloroethane	67–72–1	1.6	4.8
Indeno(1,2,3- <i>cd</i> )pyrene	193–39–5	3.7	11.1
Isophorone	78–59–1	2.2	6.6
Naphthalene	91–20–3	1.6	4.8
Nitrobenzene	98–95–3	1.9	5.7
N-Nitrosodi- <i>n</i> -propylamine <sup>3</sup>	621–64–7	—	—
Phenanthrene	85–01–8	5.4	16.2
Pyrene	129–00–0	1.9	5.7
1,2,4-Trichlorobenzene	120–82–1	1.9	5.7

<sup>1</sup> All analytes in this table are Priority Pollutants (40 CFR part 423, appendix A).

<sup>2</sup> Included for tailing factor testing.

<sup>3</sup> See section 1.2.

<sup>4</sup> MDL values from the 1984 promulgated version of Method 625.

<sup>5</sup> ML = Minimum Level—see Glossary for definition and derivation.

TABLE 2—ACID EXTRACTABLES <sup>1</sup>

Analyte	CAS registry	MDL <sup>3</sup> (ug/L)	ML <sup>4</sup> (ug/L)
4-Chloro-3-methylphenol	59–50–7	3.0	9.0
2-Chlorophenol	95–57–8	3.3	9.9
2,4-Dichlorophenol	120–83–2	2.7	8.1
2,4-Dimethylphenol	105–67–9	2.7	8.1
2,4-Dinitrophenol	51–28–5	42	126
2-Methyl-4,6-dinitrophenol	534–52–1	24	72
2-Nitrophenol	88–75–5	3.6	10.8
4-Nitrophenol	100–02–7	2.4	7.2
Pentachlorophenol <sup>2</sup>	87–86–5	3.6	10.8
Phenol	108–95–2	1.5	4.5
2,4,6-Trichlorophenol	88–06–2	2.7	8.1

<sup>1</sup> All analytes in this table are Priority Pollutants (40 CFR part 423, appendix A).

<sup>2</sup> See section 1.2; included for tailing factor testing.<sup>3</sup> MDL values from the 1984 promulgated version of Method 625.<sup>4</sup> ML = Minimum Level—see Glossary for definition and derivation.TABLE 3—ADDITIONAL EXTRACTABLE ANALYTES <sup>1, 2</sup>

Analyte	CAS registry	MDL <sup>7</sup> (ug/L)	ML <sup>8</sup> (ug/L)
Acetophenone	98-86-2		
2-Acetylaminofluorene	53-96-3		
1-Acetyl-2-thiourea	591-08-2		
Alachlor	15972-60-8		
Aldrin <sup>3</sup>	309-00-2	1.9	5.7
Ametryn	834-12-8		
2-Aminoanthraquinone	117-79-3		
Aminoazobenzene	60-09-3		
4-Aminobiphenyl	92-67-1		
3-Amino-9-ethylcarbazole	132-32-1		
Anilazine	101-05-3		
Aniline	62-53-3		
o-Anisidine	90-04-0		
Aramite	140-57-8		
Atraton	1610-17-9		
Atrazine	1912-24-9		
Azinphos-methyl	86-50-0		
Barban	101-27-9		
Benzanthrone	82-05-3		
Benzenethiol	108-98-5		
Benzoic acid	65-85-0		
2,3-Benzofluorene	243-17-4		
p-Benzoquinone	106-51-4		
Benzyl alcohol	100-51-6		
alpha-BHC <sup>3,4</sup>	319-84-6		
beta-BHC <sup>3</sup>	319-85-7	3.1	9.3
gamma-BHC (Lindane) <sup>3,4</sup>	58-89-8	4.2	12.6
delta-BHC <sup>3</sup>	319-86-8		
Biphenyl	92-52-4		
Bromacil	314-40-9		
2-Bromochlorobenzene	694-80-4		
3-Bromochlorobenzene	108-39-2		
Bromoxynil	1689-84-5		
Butachlor	2318-4669		
Butylate	2008-41-5		
n-C10 (n-decane)	124-18-5		
n-C12 (n-undecane)	112-40-2		
n-C14 (n-tetradecane)	629-59-4		
n-C16 (n-hexadecane)	544-76-3		
n-C18 (n-octadecane)	593-45-3		
n-C20 (n-eicosane)	112-95-8		
n-C22 (n-docosane)	629-97-0		
n-C24 (n-tetracosane)	646-31-1		
n-C26 (n-hexacosane)	630-01-3		
n-C28 (n-octacosane)	630-02-4		
n-C30 (n-triacontane)	638-68-6		
Captafol	2425-06-1		
Captan	133-06-2		
Carbaryl	63-25-2		
Carbazole	86-74-8		
Carbofuran	1563-66-2		
Carboxin	5234-68-4		
Carbophenothion	786-19-6		
Chlordane <sup>3,5</sup>	57-74-9		
bis(2-Chloroethyl) ether <sup>3,4</sup>	111-44-4	5.7	17.1
Chloroneb	2675-77-6		
4-Chloroaniline	106-47-8		
Chlorobenzilate	510-15-6		
Chlorfenvinphos	470-90-6		
4-Chloro-2-methylaniline	95-69-2		
3-(Chloromethyl)pyridine hydrochloride	6959-48-4		
4-Chloro-2-nitroaniline	89-63-4		
Chlorpropham	101-21-3		
Chlorothalonil	1897-45-6		
1-Chloronaphthalene	90-13-1		
3-Chloronitrobenzene	121-73-3		
4-Chloro-1,2-phenylenediamine	95-83-0		

TABLE 3—ADDITIONAL EXTRACTABLE ANALYTES <sup>1, 2</sup>—Continued

Analyte	CAS registry	MDL <sup>7</sup> (ug/L)	ML <sup>8</sup> (ug/L)
4-Chloro-1,3-phenylenediamine	5131-60-2		
2-Chlorobiphenyl	2051-60-7		
Chlorpyrifos	2921-88-2		
Coumaphos	56-72-4		
<i>m</i> + <i>p</i> -Cresol	65794-96-9		
<i>o</i> -Cresol	95-48-7		
<i>p</i> -Cresidine	120-71-8		
Crotoxyphos	7700-17-6		
2-Cyclohexyl-4,6-dinitro-phenol	131-89-5		
Cyanazine	21725-46-2		
Cycloate	1134-23-2		
<i>p</i> -Cymene	99-87-6		
Dacthal (DCPA)	1861-32-1		
4,4'-DDD <sup>3</sup>	72-54-8	2.8	8.4
4,4'-DDE <sup>3</sup>	72-55-9	5.6	16.8
4,4'-DDT <sup>3</sup>	50-29-3	4.7	14.1
Demeton-O	298-03-3		
Demeton-S	126-75-0		
Diallate ( <i>cis</i> or <i>trans</i> )	2303-16-4		
2,4-Diaminotoluene	95-80-7		
Diazinon	333-41-5		
Dibenz(a,j)acridine	224-42-0		
Dibenzofuran	132-64-9		
Dibenzo(a,e)pyrene	192-65-4		
Dibenzothiophene	132-65-0		
1,2-Dibromo-3-chloropropane	96-12-8		
3,5-Dibromo-4-hydroxybenzoxitrile	1689-84-5		
2,6-Di- <i>tert</i> -butyl- <i>p</i> -benzoquinone	719-22-2		
Dichlone	117-80-6		
2,3-Dichloroaniline	608-27-5		
2,3-Dichlorobiphenyl	16605-91-7		
2,6-Dichloro-4-nitroaniline	99-30-9		
2,3-Dichloronitrobenzene	3209-22-1		
1,3-Dichloro-2-propanol	96-23-1		
2,6-Dichlorophenol	120-83-2		
Dichlorvos	62-73-7		
Dicrotophos	141-66-2		
Dieldrin <sup>3</sup>	60-57-1	2.5	7.5
1,2:3,4-Diepoxybutane	1464-53-5		
Di(2-ethylhexyl) adipate	103-23-1		
Diethylstilbestrol	56-53-1		
Diethyl sulfate	64-67-5		
Dilantin (5,5-Diphenylhydantoin)	57-41-0		
Dimethoate	60-51-5		
3,3'-Dimethoxybenzidine	119-90-4		
Dimethylaminoazobenzene	60-11-7		
7,12-Dimethylbenz(a)anthracene	57-97-6		
3,3'-Dimethylbenzidine	119-93-7		
N,N-Dimethylformamide	68-12-2		
3,6-Dimethylphenathrene	1576-67-6		
<i>alpha, alpha</i> -Dimethylphenethylamine	122-09-8		
Dimethyl sulfone	67-71-0		
1,2-Dinitrobenzene	528-29-0		
1,3-Dinitrobenzene	99-65-0		
1,4-Dinitrobenzene	100-25-4		
Dinocap	39300-45-3		
Dinoseb	88-85-7		
Diphenylamine	122-39-4		
Diphenyl ether	101-84-8		
1,2-Diphenylhydrazine	122-66-7		
Diphenamid	957-51-7		
Diphenyldisulfide	882-33-7		
Disulfoton	298-04-4		
Disulfoton sulfoxide	2497-07-6		
Disulfoton sulfone	2497-06-5		
Endosulfan I <sup>3,4</sup>	959-98-8		
Endosulfan II <sup>3,4</sup>	33213-65-9		
Endosulfan sulfate <sup>3</sup>	1031-07-8	5.6	16.8
Endrin <sup>3,4</sup>	72-20-8		
Endrin aldehyde <sup>3,4</sup>	7421-93-4		
Endrin ketone <sup>3,4</sup>	53494-70-5		

TABLE 3—ADDITIONAL EXTRACTABLE ANALYTES <sup>1, 2</sup>—Continued

Analyte	CAS registry	MDL <sup>7</sup> (ug/L)	ML <sup>8</sup> (ug/L)
EPN	2104-64-5		
EPTC	759-94-4		
Ethion	563-12-2		
Ethoprop	13194-48-4		
Ethyl carbamate	51-79-6		
Ethyl methanesulfonate	65-50-0		
Ethylenethiourea	96-45-7		
Etridiazole	2593-15-9		
Ethynylestradiol-3-methyl ether	72-33-3		
Famphur	52-85-7		
Fenamiphos	22224-92-6		
Fenarimol	60168-88-9		
Fensulfothion	115-90-2		
Fenthion	55-38-9		
Fluchloralin	33245-39-5		
Fluridone	59756-60-4		
Heptachlor <sup>3</sup>	76-44-8	1.9	5.7
Heptachlor epoxide <sup>3</sup>	1024-57-3	2.2	6.6
2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5		
2,2',4,4',5',6-Hexachlorobiphenyl	60145-22-4		
Hexachlorocyclopentadiene <sup>3,4</sup>	77-47-4		
Hexachlorophene	70-30-4		
Hexachloropropene	1888-71-7		
Hexamethylphosphoramide	680-31-9		
Hexanoic acid	142-62-1		
Hexazinone	51235-04-2		
Hydroquinone	123-31-9		
Isodrin	465-73-6		
2-Isopropyl-naphthalene	2027-17-0		
Isosafrole	120-58-1		
Kepone	143-50-0		
Leptophos	21609-90-5		
Longifolene	475-20-7		
Malachite green	569-64-2		
Malathion	121-75-5		
Maleic anhydride	108-31-6		
Merphos	150-50-5		
Mestranol	72-33-3		
Methapyrilene	91-80-5		
Methoxychlor	72-43-5		
2-Methylbenzothiazole	120-75-2		
3-Methylcholanthrene	56-49-5		
4,4'-Methylenebis(2-chloroaniline)	101-14-4		
4,4'-Methylenebis(N,N-dimethylaniline)	101-61-1		
4,5-Methylenepheneanthrene	203-64-5		
1-Methylfluorene	1730-37-6		
Methyl methanesulfonate	66-27-3		
2-Methylnaphthalene	91-57-6		
Methylparaoxon	950-35-6		
Methyl parathion	298-00-0		
1-Methylphenanthrene	832-69-9		
2-(Methylthio)benzothiazole	615-22-5		
Metolachlor	5218-45-2		
Metribuzin	21087-64-9		
Mevinphos	7786-34-7		
Mexacarbate	315-18-4		
MGK 264	113-48-4		
Mirex	2385-85-5		
Molinate	2212-67-1		
Monocrotophos	6923-22-4		
Naled	300-76-5		
Napropamide	15299-99-7		
1,4-Naphthoquinone	130-15-4		
1-Naphthylamine	134-32-7		
2-Naphthylamine	91-59-8		
1,5-Naphthalenediamine	2243-62-1		
Nicotine	54-11-5		
5-Nitroacenaphthene	602-87-9		
2-Nitroaniline	88-74-4		
3-Nitroaniline	99-09-2		
4-Nitroaniline	100-01-6		

TABLE 3—ADDITIONAL EXTRACTABLE ANALYTES <sup>1, 2</sup>—Continued

Analyte	CAS registry	MDL <sup>7</sup> (ug/L)	ML <sup>8</sup> (ug/L)
5-Nitro- <i>o</i> -anisidine	99-59-2		
4-Nitrobiphenyl	92-93-3		
Nitrofen	1836-75-5		
5-Nitro- <i>o</i> -toluidine	99-55-8		
Nitroquinoline-1-oxide	56-57-5		
N-Nitrosodi- <i>n</i> -butylamine <sup>4</sup>	924-16-3		
N-Nitrosodiethylamine <sup>4</sup>	55-18-5		
N-Nitrosodimethylamine <sup>3,4</sup>	62-75-9		
N-Nitrosodiphenylamine <sup>3,4</sup>	86-30-6		
N-Nitrosomethylethylamine <sup>4</sup>	10595-95-6		
N-Nitrosomethylphenylamine <sup>4</sup>	614-00-6		
N-Nitrosomorpholine <sup>4</sup>	59-89-2		
N-Nitrosopiperidine <sup>4</sup>	100-75-5		
N-Nitrosopyrrolidine <sup>4</sup>	930-55-2		
<i>trans</i> -Nonachlor	39765-80-5		
Norflurazon	27314-13-2		
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8		
Octamethyl pyrophosphoramidate	152-16-9		
4,4'-Oxydianiline	101-80-4		
Parathion	56-38-2		
PCB-1016 <sup>3,5</sup>	12674-11-2		
PCB-1221 <sup>3,5</sup>	11104-28-2	30	90
PCB-1232 <sup>3,5</sup>	11141-16-5		
PCB-1242 <sup>3,5</sup>	53469-21-9		
PCB-1248 <sup>3,5</sup>	12672-29-6		
PCB-1254 <sup>3,5</sup>	11097-69-1	36	108
PCB-1260 <sup>3,5</sup>	11098-82-5		
PCB-1268 <sup>3,5</sup>	11100-14-4		
Pebulate	1114-71-2		
Pentachlorobenzene	608-93-5		
Pentachloronitrobenzene	82-68-8		
2,2',3,4',6-Pentachlorobiphenyl	68194-05-8		
Pentachloroethane	76-01-7		
Pentamethylbenzene	700-12-9		
Perylene	198-55-0		
Phenacetin	62-44-2		
<i>cis</i> -Permethrin	61949-76-6		
<i>trans</i> -Permethrin	61949-77-7		
Phenobarbital	50-06-6		
Phenothiazene	92-84-2		
1,4-Phenylenediamine	624-18-0		
1-Phenylnaphthalene	605-02-7		
2-Phenylnaphthalene	612-94-2		
Phorate	298-02-2		
Phosalone	2310-18-0		
Phosmet	732-11-6		
Phosphamidon	13171-21-6		
Phthalic anhydride	85-44-9		
<i>alpha</i> -Picoline (2-Methylpyridine)	109-06-8		
Piperonyl sulfoxide	120-62-7		
Prometon	1610-18-0		
Prometryn	7287-19-6		
Pronamide	23950-58-5		
Propachlor	1918-16-7		
Propazine	139-40-2		
Propylthiouracil	51-52-5		
Pyridine	110-86-1		
Resorcinol (1,3-Benzenediol)	108-46-3		
Safrole	94-59-7		
Simazine	122-34-9		
Simetryn	1014-70-6		
Squalene	7683-64-9		
Stirofos	22248-79-9		
Strychnine	57-24-9		
Styrene <sup>9</sup>	100-42-5		
Sulfallate	95-06-7		
Tebuthiuron	34014-18-1		
Terbacil	5902-51-2		
Terbufos	13071-79-9		
Terbutryn	886-50-0		
<i>alpha</i> -Terpineol	98-55-5		

TABLE 3—ADDITIONAL EXTRACTABLE ANALYTES <sup>1, 2</sup>—Continued

Analyte	CAS registry	MDL <sup>7</sup> (ug/L)	ML <sup>8</sup> (ug/L)
1,2,4,5-Tetrachlorobenzene	95-94-3		
2,2',4,4'-Tetrachlorobiphenyl	2437-79-8		
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin	1746-01-6		
2,3,4,6-Tetrachlorophenol	58-90-2		
Tetrachlorvinphos	22248-79-9		
Tetraethyl dithiopyrophosphate	3689-24-5		
Tetraethyl pyrophosphate	107-49-3		
Thianaphthene (2,3-Benzothiophene)	95-15-8		
Thioacetamide	62-55-5		
Thionazin	297-97-2		
Thiophenol (Benzenethiol)	108-98-5		
Thioxanthone	492-22-8		
Toluene-1,3-diisocyanate	26471-62-5		
Toluene-2,4-diisocyanate	584-84-9		
<i>o</i> -Toluidine	95-53-4		
Toxaphene <sup>3,5</sup>	8001-35-2		
Triadimefon	43121-43-3		
1,2,3-Trichlorobenzene	87-61-6		
2,4,5-Trichlorobiphenyl	15862-07-4		
2,3,6-Trichlorophenol	933-75-5		
2,4,5-Trichlorophenol	95-95-4		
Tricyclazole	41814-78-2		
Trifluralin	1582-09-8		
1,2,3-Trimethoxybenzene	634-36-6		
2,4,5-Trimethylaniline	137-17-7		
Trimethyl phosphate	512-56-1		
Triphenylene	217-59-4		
Tripropyleneglycolmethyl ether	20324-33-8		
1,3,5-Trinitrobenzene	99-35-4		
Tris(2,3-dibromopropyl) phosphate	126-72-7		
Tri- <i>p</i> -tolyl phosphate	78-32-0		
O,O,O-Triethyl phosphorothioate	126-68-1		
Trithiane	291-29-4		
Vernolate	1929-77-7		

<sup>1</sup> Compounds that have been demonstrated amenable to extraction and gas chromatography.

<sup>2</sup> Determine each analyte in the fraction that gives the most accurate result.

<sup>3</sup> Priority Pollutant (40 CFR part 423, appendix A).

<sup>4</sup> See section 1.2.

<sup>5</sup> These compounds are mixtures of various isomers.

<sup>6</sup> Detected as azobenzene.

<sup>7</sup> MDL values from the 1984 promulgated version of Method 625.

<sup>8</sup> ML = Minimum Level—see Glossary for definition and derivation.

<sup>9</sup> Styrene may be susceptible to losses during sampling, preservation, and/or extraction of full-volume (1 L) water samples. However, styrene is not regulated at 40 CFR part 136, and it is also listed as an analyte in EPA Method 624.1 and EPA Method 1625C, where such losses may be less than using Method 625.1.

TABLE 4—CHROMATOGRAPHIC CONDITIONS AND CHARACTERISTIC *m/z*'s FOR BASE/NEUTRAL EXTRACTABLES

Analyte	Retention time (sec) <sup>1</sup>	Characteristic <i>m/z</i> 's					
		Electron impact ionization			Chemical ionization		
		Primary	Second	Second	Methane	Methane	Methane
N-Nitrosodimethylamine	385	42	74	44			
bis(2-Chloroethyl) ether	704	93	63	95	63	107	109
bis(2-Chloroisopropyl) ether	799	45	77	79	77	135	137
Hexachloroethane	823	117	201	199	199	201	203
N-Nitrosodi- <i>n</i> -propylamine	830	130	42	101			
Nitrobenzene	849	77	123	65	124	152	164
Isophorone	889	82	95	138	139	167	178
bis(2-Chloroethoxy) methane	939	93	95	123	65	107	137
1,2,4-Trichlorobenzene	958	180	182	145	181	183	209
Naphthalene	967	128	129	127	129	157	169
Hexachlorobutadiene	1006	225	223	227	223	225	227
Hexachlorocyclopentadiene	1142	237	235	272	235	237	239
2-Chloronaphthalene	1200	162	164	127	163	191	203
Acenaphthylene	1247	152	151	153	152	153	181
Dimethyl phthalate	1273	163	194	164	151	163	164
2,6-Dinitrotoluene	1300	165	89	121	183	211	223
Acenaphthene	1304	154	153	152	154	155	183
2,4-Dinitrotoluene	1364	165	63	182	183	211	223

TABLE 4—CHROMATOGRAPHIC CONDITIONS AND CHARACTERISTIC m/z's FOR BASE/NEUTRAL EXTRACTABLES—Continued

Analyte	Retention time (sec) <sup>1</sup>	Characteristic m/z's					
		Electron impact ionization			Chemical ionization		
		Primary	Second	Second	Methane	Methane	Methane
Fluorene	1401	166	165	167	166	167	195
4-Chlorophenyl phenyl ether	1409	204	206	141			
Diethyl phthalate	1414	149	177	150	177	223	251
N-Nitrosodiphenylamine	1464	169	168	167	169	170	198
4-Bromophenyl phenyl ether	1498	248	250	141	249	251	277
alpha-BHC	1514	183	181	109			
Hexachlorobenzene	1522	284	142	249	284	286	288
beta-BHC	1544	183	181	109			
gamma-BHC	1557	181	183	109			
Phenanthrene	1583	178	179	176	178	179	207
Anthracene	1592	178	179	176	178	179	207
delta-BHC	1599	183	109	181			
Heptachlor	1683	100	272	274			
Di-n-butyl phthalate	1723	149	150	104	149	205	279
Aldrin	1753	66	263	220			
Fluoranthene	1817	202	101	100	203	231	243
Heptachlor epoxide	1820	353	355	351			
gamma-Chlordane	1834	373	375	377			
Pyrene	1852	202	101	100	203	231	243
Benzidine <sup>2</sup>	1853	184	92	185	185	213	225
alpha-Chlordane	1854	373	375	377			
Endosulfan I	1855	237	339	341			
4,4'-DDE	1892	246	248	176			
Dieldrin	1907	79	263	279			
Endrin	1935	81	263	82			
Endosulfan II	2014	237	339	341			
4,4'-DDD	2019	235	237	165			
Endrin aldehyde	2031	67	345	250			
Butyl benzyl phthalate	2060	149	91	206	149	299	327
Endosulfan sulfate	2068	272	387	422			
4,4'-DDT	2073	235	237	165			
Chrysene	2083	228	226	229	228	229	257
3,3'-Dichlorobenzidine	2086	252	254	126			
Benzo(a)anthracene	2090	228	229	226	228	229	257
bis(2-Ethylhexyl) phthalate	2124	149	167	279	149		
Di-n-octyl phthalate	2240	149	43	57			
Benzo(b)fluoranthene	2286	252	253	125	252	253	281
Benzo(k)fluoranthene	2293	252	253	125	252	253	281
Benzo(a)pyrene	2350	252	253	125	252	253	281
Indeno(1,2,3-cd) pyrene	2650	276	138	277	276	277	305
Dibenz(a,h)anthracene	2660	278	139	279	278	279	307
Benzo(ghi)perylene	2750	276	138	277	276	277	305
Toxaphene		159	231	233			
PCB 1016		224	260	294			
PCB 1221		190	224	260			
PCB 1232		190	224	260			
PCB 1242		224	260	294			
PCB 1248		294	330	262			
PCB 1254		294	330	362			
PCB 1260		330	362	394			

<sup>1</sup> Column: 30 m x 0.25 mm ID; 94% methyl, 5% phenyl, 1% vinyl bonded phase fused silica capillary. Conditions: 5 min at 30 °C; 30–280 at 8 °C per min; isothermal at 280 °C until benzo(ghi)perylene elutes. Gas velocity: 30 cm/sec at 30 °C (at constant pressure).  
<sup>2</sup> See section 1.2; included for tailing factor testing.

TABLE 5—CHROMATOGRAPHIC CONDITIONS AND CHARACTERISTIC m/z's FOR ACID EXTRACTABLES

Analyte	Retention Time (sec) <sup>1</sup>	Characteristic m/z's					
		Electron impact ionization			Chemical ionization		
		Prime	Second	Second	Methane	Methane	Methane
2-Chlorophenol	705	128	64	130	129	131	157
Phenol	700	94	65	66	95	123	135
2-Nitrophenol	900	139	65	109	140	168	122
2,4-Dimethylphenol	924	122	107	121	123	151	163
2,4-Dichlorophenol	947	162	164	98	163	165	167

TABLE 5—CHROMATOGRAPHIC CONDITIONS AND CHARACTERISTIC m/z's FOR ACID EXTRACTABLES—Continued

Analyte	Retention Time (sec) <sup>1</sup>	Characteristic m/z's					
		Electron impact ionization			Chemical ionization		
		Prime	Second	Second	Methane	Methane	Methane
4-Chloro-3-methylphenol .....	1091	142	107	144	143	171	183
2,4,6-Trichlorophenol .....	1165	196	198	200	197	199	201
2,4-Dinitrophenol .....	1325	184	63	154	185	213	225
4-Nitrophenol .....	1354	65	139	109	140	168	122
2-Methyl-4,6-dinitrophenol .....	1435	198	182	77	199	227	239
Pentachlorophenol .....	1561	266	264	268	267	265	269

Column: 30 m x 0.25 mm ID; 94% methyl, 5% phenyl, 1% vinyl bonded phase fused silica capillary.

Conditions: 5 min at 30 °C; 30–250 at 8 °C per min; isothermal at 280 °C until pentachlorophenol elutes.

Gas velocity: 30 cm/sec at 30 °C (at constant pressure).

TABLE 6—QC ACCEPTANCE CRITERIA—METHOD 625<sup>1</sup>

Analyte	Range for Q (%) <sup>2</sup>	Limit for s (%) <sup>3</sup>	Range for $\bar{X}$ (%) <sup>3</sup>	Range for P <sub>1</sub> , P <sub>2</sub> (%) <sup>3</sup>	Limit for RPD (%)
Acenaphthene .....	70–130	29	60–132	47–145	48
Acenaphthylene .....	60–130	45	54–126	33–145	74
Aldrin .....	7–152	39	7–152	D–166	81
Anthracene .....	58–130	40	43–120	27–133	66
Benzo(a)anthracene .....	42–133	32	42–133	33–143	53
Benzo(b)fluoranthene .....	42–140	43	42–140	24–159	71
Benzo(k)fluoranthene .....	25–146	38	25–146	11–162	63
Benzo(a)pyrene .....	32–148	43	32–148	17–163	72
Benzo(ghi)perylene .....	13–195	61	D–195	D–219	97
Benzyl butyl phthalate .....	43–140	36	D–140	D–152	60
beta-BHC .....	42–131	37	42–131	24–149	61
delta-BHC .....	D–130	77	D–120	D–120	129
bis(2-Chloroethyl)ether .....	52–130	65	43–126	12–158	108
bis(2-Chloroethoxy)methane .....	52–164	32	49–165	33–184	54
bis(2-Chloroisopropyl) ether .....	63–139	46	63–139	36–166	76
bis(2-Ethylhexyl) phthalate .....	43–137	50	29–137	8–158	82
4-Bromophenyl phenyl ether .....	70–130	26	65–120	53–127	43
2-Chloronaphthalene .....	70–130	15	65–120	60–120	24
4-Chlorophenyl phenyl ether .....	57–145	36	38–145	25–158	61
Chrysene .....	44–140	53	44–140	17–168	87
4,4'-DDD .....	D–135	56	D–135	D–145	93
4,4'-DDE .....	19–130	46	19–120	4–136	77
4,4'-DDT .....	D–171	81	D–171	D–203	135
Dibenz(a,h)anthracene .....	13–200	75	D–200	D–227	126
Di-n-butyl phthalate .....	52–130	28	8–120	1–120	47
3,3'-Dichlorobenzidine .....	18–213	65	8–213	D–262	108
Dieldrin .....	70–130	38	44–119	29–136	62
Diethyl phthalate .....	47–130	60	D–120	D–120	100
Dimethyl phthalate .....	50–130	110	D–120	D–120	183
2,4-Dinitrotoluene .....	53–130	25	48–127	39–139	42
2,6-Dinitrotoluene .....	68–137	29	68–137	50–158	48
Di-n-octyl phthalate .....	21–132	42	19–132	4–146	69
Endosulfan sulfate .....	D–130	42	D–120	D–120	70
Endrin aldehyde .....	D–189	45	D–189	D–209	75
Fluoranthene .....	47–130	40	43–121	26–137	66
Fluorene .....	70–130	23	70–120	59–121	38
Heptachlor .....	D–172	44	D–172	D–192	74
Heptachlor epoxide .....	70–130	61	71–120	26–155	101
Hexachlorobenzene .....	38–142	33	8–142	D–152	55
Hexachlorobutadiene .....	68–130	38	38–120	24–120	62
Hexachloroethane .....	55–130	32	55–120	40–120	52
Indeno(1,2,3-cd)pyrene .....	13–151	60	D–151	D–171	99
Isophorone .....	52–180	56	47–180	21–196	93
Naphthalene .....	70–130	39	36–120	21–133	65
Nitrobenzene .....	54–158	37	54–158	35–180	62
N-Nitrosodi-n-propylamine .....	59–170	52	14–198	D–230	87
PCB–1260 .....	19–130	77	19–130	D–164	128
Phenanthrene .....	67–130	24	65–120	54–120	39
Pyrene .....	70–130	30	70–120	52–120	49
1,2,4-Trichlorobenzene .....	61–130	30	57–130	44–142	50
4-Chloro-3-methylphenol .....	68–130	44	41–128	22–147	73
2-Chlorophenol .....	55–130	37	36–120	23–134	61
2,4-Dichlorophenol .....	64–130	30	53–122	39–135	50

TABLE 6—QC ACCEPTANCE CRITERIA—METHOD 625<sup>1</sup>—Continued

Analyte	Range for Q (%) <sup>2</sup>	Limit for s (%) <sup>3</sup>	Range for $\bar{X}$ (%) <sup>3</sup>	Range for P <sub>1</sub> , P <sub>2</sub> (%) <sup>3</sup>	Limit for RPD (%)
2,4-Dimethylphenol .....	58–130	35	42–120	32–120	58
2,4-Dinitrophenol .....	39–173	79	D–173	D–191	132
2-Methyl-4,6-dinitrophenol .....	56–130	122	53–130	D–181	203
2-Nitrophenol .....	61–163	33	45–167	29–182	55
4-Nitrophenol .....	35–130	79	13–129	D–132	131
Pentachlorophenol .....	42–152	52	38–152	14–176	86
Phenol .....	48–130	39	17–120	5–120	64
2,4,6-Trichlorophenol .....	69–130	35	52–129	37–144	58

<sup>1</sup> Acceptance criteria are based upon method performance data in Table 7 and from EPA Method 1625. Where necessary, limits for recovery have been broadened to assure applicability to concentrations below those used to develop Table 7.

<sup>2</sup> Test concentration = 100 µg/mL.

<sup>3</sup> Test concentration = 100 µg/L.

Q = Calibration verification (sections 7.3.1 and 13.4).

s = Standard deviation for four recovery measurements in the DOC test (section 8.2.4).

$\bar{X}$  = Average recovery for four recovery measurements in the DOC test (section 8.2.4).

P<sub>1</sub>, P<sub>2</sub> = MS/MSD recovery (section 8.3.2, section 8.4.2).

RPD = MS/MSD relative percent difference (RPD; section 8.3.3).

D = Detected; result must be greater than zero.

TABLE 7—PRECISION AND RECOVERY AS FUNCTIONS OF CONCENTRATION—METHOD 625<sup>1</sup>

Analyte	Recovery, X' (µg/L)	Single analyst precision, s <sub>r</sub> ' (µg/L)	Overall precision, S' (µg/L)
Acenaphthene .....	0.96C + 0.19	0.15 $\bar{X}$ - 0.12	0.21 $\bar{X}$ - 0.67
Acenaphthylene .....	0.89C + 0.74	0.24 $\bar{X}$ - 1.06	0.26 $\bar{X}$ - 0.54
Aldrin .....	0.78C + 1.66	0.27 $\bar{X}$ - 1.28	0.43 $\bar{X}$ + 1.13
Anthracene .....	0.80C + 0.68	0.21 $\bar{X}$ - 0.32	0.27 $\bar{X}$ - 0.64
Benzo(a)anthracene .....	0.88C - 0.60	0.15 $\bar{X}$ + 0.93	0.26 $\bar{X}$ - 0.28
Benzo(b)fluoranthene .....	0.93C - 1.80	0.22 $\bar{X}$ + 0.43	0.29 $\bar{X}$ + 0.96
Benzo(k)fluoranthene .....	0.87C - 1.56	0.19 $\bar{X}$ + 1.03	0.35 $\bar{X}$ + 0.40
Benzo(a)pyrene .....	0.90C - 0.13	0.22 $\bar{X}$ + 0.48	0.32 $\bar{X}$ + 1.35
Benzo(ghi)perylene .....	0.98C - 0.86	0.29 $\bar{X}$ + 2.40	0.51 $\bar{X}$ - 0.44
Benzyl butyl phthalate .....	0.66C - 1.68	0.18 $\bar{X}$ + 0.94	0.53 $\bar{X}$ + 0.92
beta-BHC .....	0.87C - 0.94	0.20 $\bar{X}$ - 0.58	0.30 $\bar{X}$ - 1.94
delta-BHC .....	0.29C - 1.09	0.34 $\bar{X}$ + 0.86	0.93 $\bar{X}$ - 0.17
bis(2-Chloroethyl) ether .....	0.86C - 1.54	0.35 $\bar{X}$ - 0.99	0.35 $\bar{X}$ + 0.10
bis(2-Chloroethoxy) methane .....	1.12C - 5.04	0.16 $\bar{X}$ + 1.34	0.26 $\bar{X}$ + 2.01
bis(2-Chloroisopropyl) ether .....	1.03C - 2.31	0.24 $\bar{X}$ + 0.28	0.25 $\bar{X}$ + 1.04
bis(2-Ethylhexyl) phthalate .....	0.84C - 1.18	0.26 $\bar{X}$ + 0.73	0.36 $\bar{X}$ + 0.67
4-Bromophenyl phenyl ether .....	0.91C - 1.34	0.13 $\bar{X}$ + 0.66	0.16 $\bar{X}$ + 0.66
2-Chloronaphthalene .....	0.89C + 0.01	0.07 $\bar{X}$ + 0.52	0.13 $\bar{X}$ + 0.34
4-Chlorophenyl phenyl ether .....	0.91C + 0.53	0.20 $\bar{X}$ - 0.94	0.30 $\bar{X}$ - 0.46
Chrysene .....	0.93C - 1.00	0.28 $\bar{X}$ + 0.13	0.33 $\bar{X}$ - 0.09
4,4'-DDD .....	0.56C - 0.40	0.29 $\bar{X}$ - 0.32	0.66 $\bar{X}$ - 0.96
4,4'-DDE .....	0.70C - 0.54	0.26 $\bar{X}$ - 1.17	0.39 $\bar{X}$ - 1.04
4,4'-DDT .....	0.79C - 3.28	0.42 $\bar{X}$ + 0.19	0.65 $\bar{X}$ - 0.58
Dibenz(a,h)anthracene .....	0.88C + 4.72	0.30 $\bar{X}$ + 8.51	0.59 $\bar{X}$ + 0.25
Di-n-butyl phthalate .....	0.59C + 0.71	0.13 $\bar{X}$ + 1.16	0.39 $\bar{X}$ + 0.60
3,3'-Dichlorobenzidine .....	1.23C - 12.65	0.28 $\bar{X}$ + 7.33	0.47 $\bar{X}$ + 3.45
Dieldrin .....	0.82C - 0.16	0.20 $\bar{X}$ - 0.16	0.26 $\bar{X}$ - 0.07
Diethyl phthalate .....	0.43C + 1.00	0.28 $\bar{X}$ + 1.44	0.52 $\bar{X}$ + 0.22
Dimethyl phthalate .....	0.20C + 1.03	0.54 $\bar{X}$ + 0.19	1.05 $\bar{X}$ - 0.92
2,4-Dinitrotoluene .....	0.92C - 4.81	0.12 $\bar{X}$ + 1.06	0.21 $\bar{X}$ + 1.50
2,6-Dinitrotoluene .....	1.06C - 3.60	0.14 $\bar{X}$ + 1.26	0.19 $\bar{X}$ + 0.35
Di-n-octyl phthalate .....	0.76C - 0.79	0.21 $\bar{X}$ + 1.19	0.37 $\bar{X}$ + 1.19
Endosulfan sulfate .....	0.39C + 0.41	0.12 $\bar{X}$ + 2.47	0.63 $\bar{X}$ - 1.03
Endrin aldehyde .....	0.76C - 3.86	0.18 $\bar{X}$ + 3.91	0.73 $\bar{X}$ - 0.62
Fluoranthene .....	0.81C + 1.10	0.22 $\bar{X}$ + 0.73	0.28 $\bar{X}$ - 0.60
Fluorene .....	0.90C - 0.00	0.12 $\bar{X}$ + 0.26	0.13 $\bar{X}$ + 0.61
Heptachlor .....	0.87C - 2.97	0.24 $\bar{X}$ - 0.56	0.50 $\bar{X}$ - 0.23
Heptachlor epoxide .....	0.92C - 1.87	0.33 $\bar{X}$ - 0.46	0.28 $\bar{X}$ + 0.64
Hexachlorobenzene .....	0.74C + 0.66	0.18 $\bar{X}$ - 0.10	0.43 $\bar{X}$ - 0.52
Hexachlorobutadiene .....	0.71C - 1.01	0.19 $\bar{X}$ + 0.92	0.26 $\bar{X}$ + 0.49
Hexachloroethane .....	0.73C - 0.83	0.17 $\bar{X}$ + 0.67	0.17 $\bar{X}$ + 0.80
Indeno(1,2,3-cd)pyrene .....	0.78C - 3.10	0.29 $\bar{X}$ + 1.46	0.50 $\bar{X}$ + 0.44
Isophorone .....	1.12C + 1.41	0.27 $\bar{X}$ + 0.77	0.33 $\bar{X}$ + 0.26
Naphthalene .....	0.76C + 1.58	0.21 $\bar{X}$ - 0.41	0.30 $\bar{X}$ - 0.68
Nitrobenzene .....	1.09C - 3.05	0.19 $\bar{X}$ + 0.92	0.27 $\bar{X}$ + 0.21
N-Nitrosodi-n-propylamine .....	1.12C - 6.22	0.27 $\bar{X}$ + 0.68	0.44 $\bar{X}$ + 0.47

TABLE 7—PRECISION AND RECOVERY AS FUNCTIONS OF CONCENTRATION—METHOD 625<sup>1</sup>—Continued

Analyte	Recovery, X' (µg/L)	Single analyst precision, s <sub>r</sub> ' (µg/L)	Overall precision, S' (µg/L)
PCB-1260 .....	0.81C – 10.86	0.35 $\bar{X}$ + 3.61	0.43 $\bar{X}$ + 1.82
Phenanthrene .....	0.87C – 0.06	0.12 $\bar{X}$ + 0.57	0.15 $\bar{X}$ + 0.25
Pyrene .....	0.84C – 0.16	0.16 $\bar{X}$ + 0.06	0.15 $\bar{X}$ + 0.31
1,2,4-Trichlorobenzene .....	0.94C – 0.79	0.15 $\bar{X}$ + 0.85	0.21 $\bar{X}$ + 0.39
4-Chloro-3-methylphenol .....	0.84C + 0.35	0.23 $\bar{X}$ + 0.75	0.29 $\bar{X}$ + 1.31
2-Chlorophenol .....	0.78C + 0.29	0.18 $\bar{X}$ + 1.46	0.28 $\bar{X}$ + 0.97
2,4-Dichlorophenol .....	0.87C + 0.13	0.15 $\bar{X}$ + 1.25	0.21 $\bar{X}$ + 1.28
2,4-Dimethylphenol .....	0.71C + 4.41	0.16 $\bar{X}$ + 1.21	0.22 $\bar{X}$ + 1.31
2,4-Dinitrophenol .....	0.81C – 18.04	0.38 $\bar{X}$ + 2.36	0.42 $\bar{X}$ + 26.29
2-Methyl-4,6-Dinitrophenol .....	1.04C – 28.04	0.05 $\bar{X}$ + 42.29	0.26 $\bar{X}$ + 23.10
2-Nitrophenol .....	1.07C – 1.15	0.16 $\bar{X}$ + 1.94	0.27 $\bar{X}$ + 2.60
4-Nitrophenol .....	0.61C – 1.22	0.38 $\bar{X}$ + 2.57	0.44 $\bar{X}$ + 3.24
Pentachlorophenol .....	0.93C + 1.99	0.24 $\bar{X}$ + 3.03	0.30 $\bar{X}$ + 4.33
Phenol .....	0.43C + 1.26	0.26 $\bar{X}$ + 0.73	0.35 $\bar{X}$ + 0.58
2,4,6-Trichlorophenol .....	0.91C – 0.18	0.16 $\bar{X}$ + 2.22	0.22 $\bar{X}$ + 1.81

<sup>1</sup> Regressions based on data from Reference 2.

X' = Expected recovery for one or more measurements of a sample containing a concentration of C, in µg/L.

s<sub>r</sub>' = Expected single analyst standard deviation of measurements at an average concentration found of  $\bar{X}$ , in µg/L.

S' = Expected interlaboratory standard deviation of measurements at an average concentration found of  $\bar{X}$ , in µg/L.

C = True value for the concentration, in µg/L.

$\bar{X}$  = Average recovery found for measurements of samples containing a concentration of C, in µg/L.

TABLE 8—SUGGESTED INTERNAL AND SURROGATE STANDARDS

Base/neutral fraction	Range for surrogate recovery (%) <sup>1</sup>	
	Calibration verification	Recovery from samples
Acenaphthalene-d <sub>8</sub> .....	66–152	33–168
Acenaphthene-d <sub>10</sub> .....	71–141	30–180
Aniline-d <sub>5</sub> .....	.....	.....
Anthracene-d <sub>10</sub> .....	58–171	23–142
Benzo(a)anthracene-d <sub>12</sub> .....	28–357	22–329
Benzo(a)pyrene-d <sub>12</sub> .....	32–194	32–194
4-Chloroaniline-d <sub>4</sub> .....	1–145	1–145
bis(2-Chloroethyl) ether-d <sub>8</sub> .....	52–194	25–222
Chrysene-d <sub>12</sub> .....	23–290	23–290
Decafluorobiphenyl .....	.....	.....
4,4'-Dibromobiphenyl .....	.....	.....
4,4'-Dibromooctafluorobiphenyl .....	.....	.....
1,4-Dichlorobenzene-d <sub>4</sub> .....	65–153	11–245
2,2'-Difluorobiphenyl .....	.....	.....
Dimethyl phthalate-d <sub>6</sub> .....	47–211	1–500
Fluoranthene-d <sub>10</sub> .....	47–215	30–187
Fluorene-d <sub>10</sub> .....	61–164	38–172
4-Fluoroaniline .....	.....	.....
1-Fluoronaphthalene .....	.....	.....
2-Fluoronaphthalene .....	.....	.....
2-Methylnaphthalene-d <sub>10</sub> .....	50–150	50–150
Naphthalene-d <sub>8</sub> .....	71–141	22–192
Nitrobenzene-d <sub>5</sub> .....	46–219	15–314
2,3,4,5,6-Pentafluorobiphenyl .....	.....	.....
Perylene-d <sub>12</sub> .....	.....	.....
Phenanthrene-d <sub>10</sub> .....	67–149	34–168
Pyrene-d <sub>10</sub> .....	48–210	28–196
Pyridine-d <sub>5</sub> .....	.....	.....
Acid fraction .....	.....	.....
2-Chlorophenol-d <sub>4</sub> .....	55–180	33–180
2,4-Dichlorophenol-d <sub>3</sub> .....	64–157	34–182
4,6-Dinitro-2-methylphenol-d <sub>2</sub> .....	56–177	22–307
2-Fluorophenol .....	.....	.....
4-Methylphenol-d <sub>8</sub> .....	25–111	25–111
2-Nitrophenol-d <sub>4</sub> .....	61–163	37–163
4-Nitrophenol-d <sub>4</sub> .....	35–287	6–500
Pentafluorophenol .....	.....	.....
2-Perfluoromethylphenol .....	.....	.....
Phenol-d <sub>5</sub> .....	48–208	8–424

<sup>1</sup> Recovery from samples is the wider of the criteria in the CLP SOW for organics or in Method 1625.

TABLE 9A—DFTPP KEY m/z's AND ABUNDANCE CRITERIA FOR QUADRUPOLE INSTRUMENTS <sup>1</sup>

m/z	Abundance criteria
51 .....	30–60 percent of m/z 198.
68 .....	Less than 2 percent of m/z 69.
70 .....	Less than 2 percent of m/z 69.
127 .....	40–60 percent of base peak m/z 198.
197 .....	Less than 1 percent of m/z 198.
198 .....	Base peak, 100 percent relative abundance.
199 .....	5–9 percent of m/z 198.
275 .....	10–30 percent of m/z 198.
365 .....	Greater than 1 percent of m/z 198.
441 .....	Present but less than m/z 443.
442 .....	40–100 percent of m/z 198.
443 .....	17–23 percent of m/z 442.

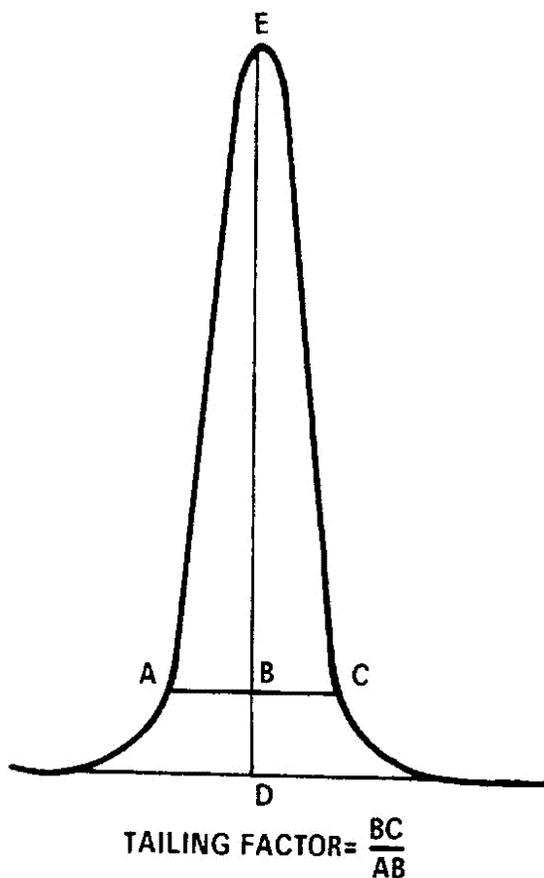
<sup>1</sup> Criteria in these tables are for quadrupole and time-of-flight instruments. Alternative tuning criteria from other published EPA reference methods may be used provided method performance is not adversely affected. Alternative tuning criteria specified by an instrument manufacturer may also be used for another type of mass spectrometer, provided method performance is not adversely affected.

TABLE 9B—DFTPP KEY m/z's AND ABUNDANCE CRITERIA FOR TIME-OF-FLIGHT INSTRUMENTS <sup>1</sup>

m/z	Abundance criteria
51 .....	10–85 percent of the base peak.
68 .....	Less than 2 percent of m/z 69.
70 .....	Less than 2 percent of m/z 69.
127 .....	10–80 percent of the base peak.
197 .....	Less than 2 percent of Mass 198.
198 .....	Base peak, or greater than 50% of m/z 442.
199 .....	5–9 percent of m/z 198.
275 .....	10–60 percent of the base peak.
365 .....	Greater than 0.5 percent of m/z 198.
441 .....	Less than 150 percent of m/z 443.
442 .....	Base peak or greater than 30 percent of m/z 198.
443 .....	15–24 percent of m/z 442.

<sup>1</sup> Criteria in these tables are for quadrupole and time-of-flight instruments. Alternative tuning criteria from other published EPA reference methods may be used provided method performance is not adversely affected. Alternative tuning criteria specified by an instrument manufacturer may also be used for another type of mass spectrometer, or for an alternative carrier gas, provided method performance is not adversely affected.

## 21. Figures



Example calculation: Peak Height = DE = 100 mm  
10% Peak Height = BD = 10 mm  
Peak Width at 10% Peak Height = AC = 23 mm  
AB = 11 mm  
BC = 12 mm  
Therefore: Tailing Factor =  $\frac{12}{11} = 1.1$

Figure 1 Tailing factor calculation

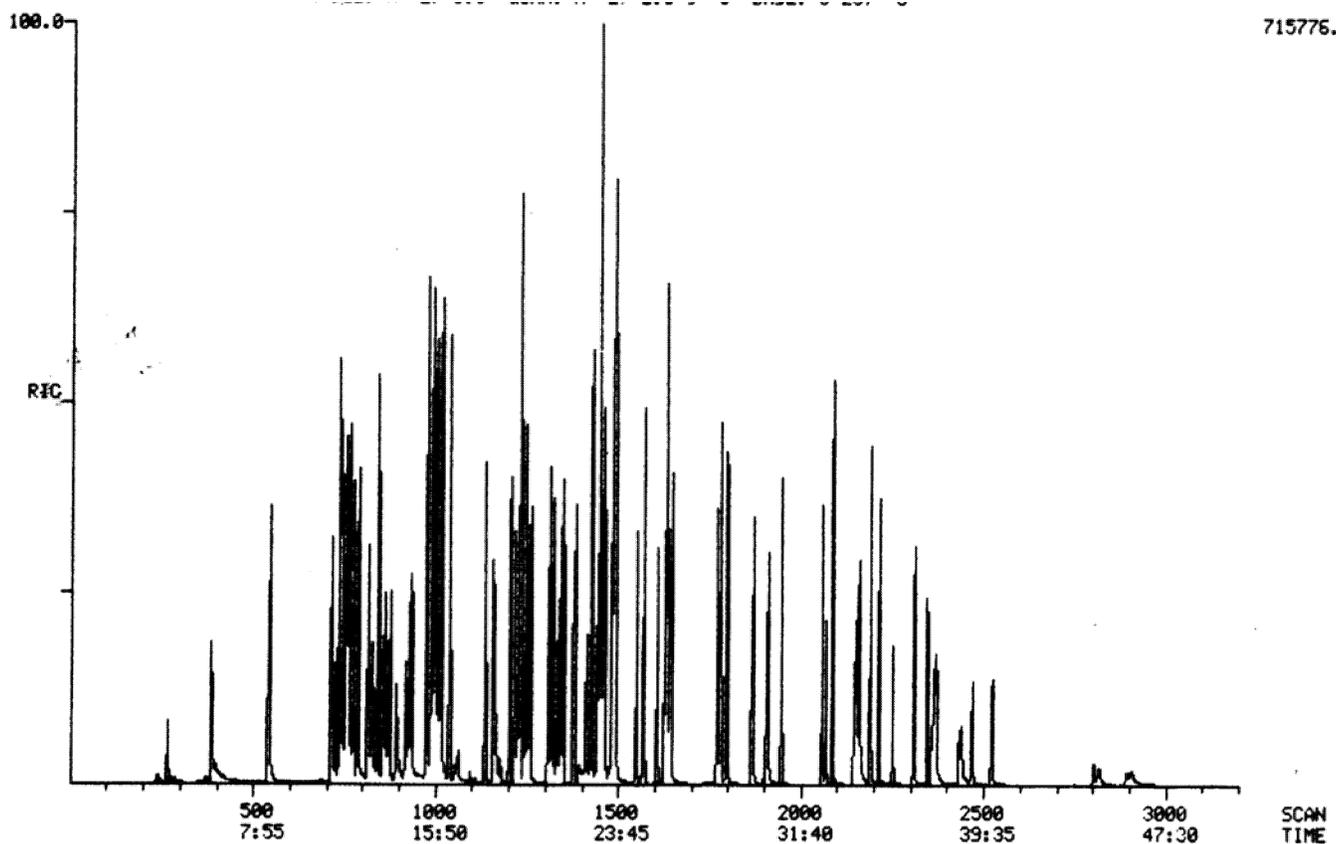


Figure 2 Chromatogram of combined acid/base/neutral standard

## 22. Glossary

These definitions and purposes are specific to this method but have been conformed to common usage to the extent possible.

22.1 Units of weight and measure and their abbreviations.

22.1.1 Symbols.

°C degrees Celsius

µg microgram

µL microliter

< less than

> greater than

≤ less than or equal to

% percent

22.1.2 Abbreviations (in alphabetical order).

cm centimeter

g gram

h hour

ID inside diameter

in. inch

L liter

m mass or meter

mg milligram

min minute

mL milliliter

mm millimeter

ms millisecond

m/z mass-to-charge ratio

N normal; gram molecular weight of solute divided by hydrogen equivalent of solute, per liter of solution

ng nanogram

pg picogram

ppb part-per-billion

ppm part-per-million

ppt part-per-trillion

psig pounds-per-square inch gauge

22.2 Definitions and acronyms (in alphabetical order).

Analyte—A compound or mixture of compounds (*e.g.*, PCBs) tested for by this method. The analytes are listed in Tables 1–3.

Batch—See Extraction.

Blank—An aliquot of reagent water that is treated exactly as a sample including exposure to all glassware, equipment, solvents, reagents, internal standards, and surrogates that are used with samples. The blank is used to determine if analytes or interferences are present in the laboratory environment, the reagents, or the apparatus.

Calibration—The process of determining the relationship between the output or response of a measuring instrument and the value of an input standard. Historically, EPA has referred to a multi-point calibration as the “initial calibration,” to differentiate it from a single-point calibration verification.

Calibration standard—A solution prepared from stock solutions and/or a secondary standards and containing the analytes of interest, surrogates, and internal standards. The calibration standard is used to calibrate the response of the GC/MS instrument against analyte concentration.

Calibration verification standard—The mid-point calibration standard used to verify calibration. See sections 7.3 and 13.4.

Descriptor—In SIM, the beginning and ending retention times for the RT window,

the m/z's sampled in the RT window, and the dwell time at each m/z.

Extracted ion current profile (EICP)—The line described by the signal at a given m/z.

Extraction Batch—A set of up to 20 field samples (not including QC samples) started through the extraction process on a given 24-hour shift (section 3.1). Each extraction batch must be accompanied by a blank (section 8.5), a laboratory control sample (LCS, section 8.4), and a matrix spike and duplicate (MS/MSD; Section 8.3), resulting in a minimum of five analyses (1 sample, 1 blank, 1 LCS, 1 MS, and 1 MSD) and a maximum of 24 analyses (20 field samples, 1 blank, 1 LCS, 1 MS, and 1 MSD) for the batch. If greater than 20 samples are to be extracted in a 24-hour shift, the samples must be separated into extraction batches of 20 or fewer samples.

Field Duplicates—Two samples collected at the same time and placed under identical conditions, and treated identically throughout field and laboratory procedures. Results of analyses of the field duplicates provide an estimate of the precision associated with sample collection, preservation, and storage, as well as with laboratory procedures.

Field blank—An aliquot of reagent water or other reference matrix that is placed in a sample container in the field, and treated as a sample in all respects, including exposure to sampling site conditions, storage, preservation, and all analytical procedures. The purpose of the field blank is to

determine if the field or sample transporting procedures and environments have contaminated the sample.

GC—Gas chromatograph or gas chromatography.

Internal standard—A compound added to an extract or standard solution in a known amount and used as a reference for quantitation of the analytes of interest and surrogates. In this method the internal standards are stable isotopically labeled analogs of selected method analytes (Table 8). Also see Internal standard quantitation.

Internal standard quantitation—A means of determining the concentration of an analyte of interest (Tables 1–3) by reference to a compound not expected to be found in a sample.

DOC—Initial demonstration of capability (section 8.2); four aliquots of reagent water spiked with the analytes of interest and analyzed to establish the ability of the laboratory to generate acceptable precision and recovery. A DOC is performed prior to the first time this method is used and any time the method or instrumentation is modified.

Laboratory Control Sample (LCS; laboratory fortified blank; section 8.4)—An aliquot of reagent water spiked with known quantities of the analytes of interest and surrogates. The LCS is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery.

Laboratory fortified sample matrix—See Matrix spike.

Laboratory reagent blank—A blank run on laboratory reagents; *e.g.*, methylene chloride (section 11.1.5).

Matrix spike (MS) and matrix spike duplicate (MSD) (laboratory fortified sample matrix and duplicate)—Two aliquots of an environmental sample to which known quantities of the analytes of interest and surrogates are added in the laboratory. The MS/MSD are prepared and analyzed exactly like a field sample. Their purpose is to quantify any additional bias and imprecision caused by the sample matrix. The background concentrations of the analytes in the sample matrix must be determined in a separate aliquot and the measured values in the MS/MSD corrected for background concentrations.

May—This action, activity, or procedural step is neither required nor prohibited.

May not—This action, activity, or procedural step is prohibited.

Method blank—See blank.

Method detection limit (MDL)—A detection limit determined by the procedure at 40 CFR part 136, appendix B. The MDLs determined by EPA in the original version of the method are listed in Tables 1, 2 and 3. As noted in section 1.5, use the MDLs in Tables 1, 2, and 3 in conjunction with current MDL data from the laboratory actually analyzing samples to assess the sensitivity of this procedure relative to project objectives and regulatory requirements (where applicable).

Minimum level (ML)—The term “minimum level” refers to either the sample concentration equivalent to the lowest

calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level.”

MS—Mass spectrometer or mass spectrometry, or matrix spike (a QC sample type).

MSD—Matrix spike duplicate (a QC sample type).

Must—This action, activity, or procedural step is required.

$m/z$ —The ratio of the mass of an ion ( $m$ ) detected in the mass spectrometer to the charge ( $z$ ) of that ion.

Preparation blank—See blank.

Quality control check sample (QCS)—See Laboratory Control Sample.

Reagent water—Water demonstrated to be free from the analytes of interest and potentially interfering substances at the MDLs for the analytes in this method.

Regulatory compliance limit (or regulatory concentration limit)—A limit on the concentration or amount of a pollutant or contaminant specified in a nationwide standard, in a permit, or otherwise established by a regulatory/control authority.

Relative retention time (RRT)—The ratio of the retention time of an analyte to the retention time of its associated internal standard. RRT compensates for small changes in the GC temperature program that can affect the absolute retention times of the analyte and internal standard. RRT is a unitless quantity.

Relative standard deviation (RSD)—The standard deviation times 100 divided by the mean. Also termed “coefficient of variation.”

RF—Response factor. See section 7.2.2.

RSD—See relative standard deviation.

Safety Data Sheet (SDS)—Written information on a chemical’s toxicity, health hazards, physical properties, fire, and reactivity, including storage, spill, and handling precautions that meet the requirements of OSHA, 29 CFR 1910.1200(g) and appendix D to § 1910.1200. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.

Selected Ion Monitoring (SIM)—An MS technique in which a few  $m/z$ ’s are monitored. When used with gas chromatography, the  $m/z$ ’s monitored are usually changed periodically throughout the chromatographic run, to correlate with the characteristic  $m/z$ ’s of the analytes, surrogates, and internal standards as they elute from the chromatographic column. The technique is often used to increase sensitivity and minimize interferences.

Signal-to-noise ratio (S/N)—The height of the signal as measured from the mean (average) of the noise to the peak maximum divided by the width of the noise.

Should—This action, activity, or procedural step is suggested but not required.

SPE—Solid-phase extraction; an extraction technique in which an analyte is extracted from an aqueous solution by passage over or through a material capable of reversibly adsorbing the analyte. Also termed liquid-solid extraction.

Stock solution—A solution containing an analyte that is prepared using a reference material traceable to EPA, the National Institute of Science and Technology (NIST), or a source that will attest to the purity, authenticity, and concentration of the standard.

Surrogate—A compound unlikely to be found in a sample, and which is spiked into sample in a known amount before extraction or other processing, and is quantitated with the same procedures used to quantify other sample components. The purpose of the surrogate is to monitor method performance with each sample.

\* \* \* \* \*

■ 9. Appendix B to part 136 is revised to read as follows:

## Appendix B to Part 136—Definition and Procedure for the Determination of the Method Detection Limit—Revision 2

### Definition

The method detection limit (MDL) is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results.

### I. Scope and Application

(1) The MDL procedure is designed to be a straightforward technique for estimation of the detection limit for a broad variety of physical and chemical methods. The procedure requires a complete, specific, and well-defined analytical method. It is essential that all sample processing steps used by the laboratory be included in the determination of the method detection limit.

(2) The MDL procedure is *not* applicable to methods that do not produce results with a continuous distribution, such as, but not limited to, methods for whole effluent toxicity, presence/absence methods, and microbiological methods that involve counting colonies. The MDL procedure also is *not* applicable to measurements such as, but not limited to, biochemical oxygen demand, color, pH, specific conductance, many titration methods, and any method where low-level spiked samples cannot be prepared. Except as described in the addendum, for the purposes of this procedure, “spiked samples” are prepared from a clean reference matrix, such as reagent water, spiked with a known and consistent quantity of the analyte. MDL determinations using spiked samples may not be appropriate for all gravimetric methods (*e.g.*, residue or total suspended solids), but an MDL based on method blanks can be determined in such instances.

### II. Procedure

(1) Estimate the initial MDL using one or more of the following:

(a) The mean determined concentration plus three times the standard deviation of a set of method blanks.

(b) The concentration value that corresponds to an instrument signal-to-noise ratio in the range of 3 to 5.

(c) The concentration equivalent to three times the standard deviation of replicate instrumental measurements of spiked blanks.

(d) That region of the calibration where there is a significant change in sensitivity, *i.e.*, a break in the slope of the calibration.

(e) Instrumental limitations.

(f) Previously determined MDL.

**Note:** It is recognized that the experience of the analyst is important to this process. However, the analyst should include some or all of the above considerations in the initial estimate of the MDL.

(2) Determine the initial MDL.

**Note:** The Initial MDL is used when the laboratory does not have adequate data to perform the Ongoing Annual Verification specified in Section (4), typically when a new method is implemented or if a method was rarely used in the last 24 months.

(a) Select a spiking level, typically 2—10 times the estimated MDL in Section 1. Spiking levels in excess of 10 times the estimated detection limit may be required for analytes with very poor recovery (*e.g.*, for an analyte with 10% recovery, spiked at 100 micrograms/L, with mean recovery of 10 micrograms/L; the calculated MDL may be around 3 micrograms/L. Therefore, in this example, the spiking level would be 33 times the MDL, but spiking lower may result in no recovery at all).

(b) Process a minimum of seven spiked samples and seven method blank samples through all steps of the method. The samples used for the MDL must be prepared in at least three batches on three separate calendar dates and analyzed on three separate calendar dates. (Preparation and analysis may be on the same day.) Existing data may be used, if compliant with the requirements for at least three batches, and generated within the last twenty four months. The most recent available data for method blanks and spiked samples must be used. Statistical outlier removal procedures should not be used to remove data for the initial MDL determination, since the total number of observations is small and the purpose of the MDL procedure is to capture routine method variability. However, documented instances of gross failures (*e.g.*, instrument malfunctions, mislabeled samples, cracked vials) may be excluded from the calculations, provided that at least seven spiked samples and seven method blanks are available. (The rationale for removal of specific outliers must be documented and maintained on file with the results of the MDL determination.)

(i) If there are multiple instruments that will be assigned the same MDL, then the sample analyses must be distributed across all of the instruments.

(ii) A minimum of two spiked samples and two method blank samples prepared and analyzed on different calendar dates is required for each instrument. Each analytical batch may contain one spiked sample and one method blank sample run together. A

spiked sample and a method blank sample may be analyzed in the same batch, but are not required to be.

(iii) The same prepared extract may be analyzed on multiple instruments so long as the minimum requirement of seven preparations in at least three separate batches is maintained.

(c) Evaluate the spiking level: If any result for any individual analyte from the spiked samples does not meet the method qualitative identification criteria or does not provide a numerical result greater than zero, then repeat the spiked samples at a higher concentration. (Qualitative identification criteria are a set of rules or guidelines for establishing the identification or presence of an analyte using a measurement system. Qualitative identification does not ensure that quantitative results for the analyte can be obtained.)

(d) Make all computations as specified in the analytical method and express the final results in the method-specified reporting units.

(i) Calculate the sample standard deviation ( $S$ ) of the replicate spiked sample measurements and the sample standard deviation of the replicate method blank measurements from all instruments to which the MDL will be applied.

(ii) Compute the  $MDL_s$  (the MDL based on spiked samples) as follows:

$$MDL_s = t_{(n-1, 1-\alpha=0.99)} S_s$$

Where:

$MDL_s$  = the method detection limit based on spiked samples

$t_{(n-1, 1-\alpha=0.99)}$  = the Student's t-value appropriate for a single-tailed 99th percentile t statistic and a standard deviation estimate with  $n-1$  degrees of freedom. See Addendum Table 1.

$S_s$  = sample standard deviation of the replicate spiked sample analyses.

(iii) Compute the  $MDL_b$  (the MDL based on method blanks) as follows:

(A) If none of the method blanks give numerical results for an individual analyte, the  $MDL_b$  does not apply. A numerical result includes both positive and negative results, including results below the current MDL, but not results of "ND" (not detected) commonly observed when a peak is not present in chromatographic analysis.

(B) If some (but not all) of the method blanks for an individual analyte give numerical results, set the  $MDL_b$  equal to the highest method blank result. If more than 100 method blanks are available, set  $MDL_b$  to the level that is no less than the 99th percentile of the method blank results. For "n" method blanks where  $n \geq 100$ , sort the method blanks in rank order. The  $(n * 0.99)$  ranked method blank result (round to the nearest whole number) is the  $MDL_b$ . For example, to find  $MDL_b$  from a set of 164 method blanks where the highest ranked method blank results are . . . 1.5, 1.7, 1.9, 5.0, and 10, then  $164 * 0.99 = 162.36$  which rounds to the 162nd method blank result. Therefore,  $MDL_b$  is 1.9 for  $n = 164$  (10 is the 164th result, 5.0 is the 163rd result, and 1.9 is the 162nd result).

Alternatively, you may use spreadsheet algorithms to calculate the 99th percentile to interpolate between the ranks more precisely.

(C) If all of the method blanks for an individual analyte give numerical results, then calculate the  $MDL_b$  as:

$$MDL_b = \bar{X} + t_{(n-1, 1-\alpha=0.99)} S_b$$

Where:

$MDL_b$  = the MDL based on method blanks  
 $\bar{X}$  = mean of the method blank results (use zero in place of the mean if the mean is negative)

$t_{(n-1, 1-\alpha=0.99)}$  = the Student's t-value appropriate for the single-tailed 99th percentile t statistic and a standard deviation estimate with  $n-1$  degrees of freedom. See Addendum Table 1.

$S_b$  = sample standard deviation of the replicate method blank sample analyses.

**Note:** If 100 or more method blanks are available, as an option,  $MDL_b$  may be set to the concentration that is greater than or equal to the 99th percentile of the method blank results, as described in Section (2)(d)(iii)(B).

(e) Select the greater of  $MDL_s$  or  $MDL_b$  as the initial MDL.

(3) Ongoing Data Collection.

(a) During any quarter in which samples are being analyzed, prepare and analyze a minimum of two spiked samples on each instrument, in separate batches, using the same spiking concentration used in Section 2. If any analytes are repeatedly not detected in the quarterly spiked sample analyses, or do not meet the qualitative identification criteria of the method (see section 2(c) of this procedure), then this is an indication that the spiking level is not high enough and should be adjusted upward. Note that it is not necessary to analyze additional method blanks together with the spiked samples, the method blank population should include all of the routine method blanks analyzed with each batch during the course of sample analysis.

(b) Ensure that at least seven spiked samples and seven method blanks are completed for the annual verification. If only one instrument is in use, a minimum of seven spikes are still required, but they may be drawn from the last two years of data collection.

(c) At least once per year, re-evaluate the spiking level.

(i) If more than 5% of the spiked samples do not return positive numerical results that meet all method qualitative identification criteria, then the spiking level must be increased and the initial MDL re-determined following the procedure in section 2.

(ii) [Reserved]

(d) If the method is altered in a way that can be reasonably expected to change its sensitivity, then re-determine the initial MDL according to section 2, and the restart the ongoing data collection.

(e) If a new instrument is added to a group of instruments whose data are being pooled to create a single MDL, analyze a minimum of two spiked replicates and two method blank replicates on the new instrument. If both method blank results are below the existing MDL, then the existing  $MDL_b$  is validated. Combine the new spiked sample results to the existing spiked sample results and recalculate the  $MDL_s$  as in Section 4. If the recalculated  $MDL_s$  does not vary by more than the factor specified in section 4(f) of this

procedure, then the existing MDL<sub>s</sub> is validated. If either of these two conditions is not met, then calculate a new MDL following the instructions in section 2.

(4) Ongoing Annual Verification.

(a) At least once every thirteen months, recalculate MDL<sub>s</sub> and MDL<sub>b</sub> from the collected spiked samples and method blank results using the equations in section 2.

(b) Include data generated within the last twenty four months, but only data with the same spiking level. Only documented instances of gross failures (e.g., instrument malfunctions, mislabeled samples, cracked vials) may be excluded from the calculations. (The rationale for removal of specific outliers must be documented and maintained on file with the results of the MDL determination.) If the laboratory believes the sensitivity of the method has changed significantly, then the most recent data available may be used, maintaining compliance with the requirement for at least seven replicates in three separate batches on three separate days (see section 2b).

(c) Include the initial MDL spiked samples, if the data were generated within twenty four months.

(d) Only use data associated with acceptable calibrations and batch QC. Include all routine data, with the exception of batches that are rejected and the associated samples reanalyzed. If the method has been altered in a way that can be reasonably expected to change its sensitivity, then use only data collected after the change.

(e) Ideally, use all method blank results from the last 24 months for the MDL<sub>b</sub> calculation. The laboratory has the option to use only the last six months of method blank data or the fifty most recent method blanks, whichever criteria yields the greater number of method blanks.

(f) The verified MDL is the greater of the MDL<sub>s</sub> or MDL<sub>b</sub>. If the verified MDL is within 0.5 to 2.0 times the existing MDL, and fewer than 3% of the method blank results (for the individual analyte) have numerical results above the existing MDL, then the existing MDL may optionally be left unchanged. Otherwise, adjust the MDL to the new verification MDL. (The range of 0.5 to 2.0

approximates the 95th percentile confidence interval for the initial MDL determination with six degrees of freedom.)

**Addendum to Section II: Determination of the MDL for a Specific Matrix**

The MDL may be determined in a specific sample matrix as well as in reagent water.

(1) Analyze the sample matrix to determine the native (background) concentration of the analyte(s) of interest.

(2) If the response for the native concentration is at a signal-to-noise ratio of approximately 5–20, determine the matrix-specific MDL according to Section 2 but without spiking additional analyte.

(3) Calculate MDL<sub>b</sub> using the method blanks, not the sample matrix.

(4) If the signal-to-noise ratio is less than 5, then the analyte(s) should be spiked into the sample matrix to obtain a concentration that will give results with a signal-to-noise ratio of approximately 10–20.

(5) If the analytes(s) of interest have signal-to-noise ratio(s) greater than approximately 20, then the resulting MDL is likely to be biased high.

TABLE 1—SINGLE-TAILED 99th PERCENTILE t STATISTIC

Number of replicates	Degrees of freedom (n – 1)	t <sub>(n – 1, 0.99)</sub>
7	6	3.143
8	7	2.998
9	8	2.896
10	9	2.821
11	10	2.764
16	15	2.602
21	20	2.528
26	25	2.485
31	30	2.457
32	31	2.453
48	47	2.408
50	49	2.405
61	60	2.390
64	63	2.387
80	79	2.374
96	95	2.366
100	99	2.365

III. Documentation

The analytical method used must be specifically identified by number or title and the MDL for each analyte expressed in the appropriate method reporting units. Data and calculations used to establish the MDL must

be able to be reconstructed upon request. The sample matrix used to determine the MDL must also be identified with MDL value. Document the mean spiked and recovered analyte levels with the MDL. The rationale for removal of outlier results, if any, must be

documented and maintained on file with the results of the MDL determination.

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