

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2024-0303; FRL-7623-02-OAR]

RIN 2060-AU73

National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is finalizing amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Chemical Manufacturing Area Source (CMAS) categories pursuant to a technology review under Clean Air Act (CAA) section 112(d)(6). Specifically, the EPA is finalizing new leak detection and repair (LDAR) requirements for equipment leaks and heat exchange systems in organic hazardous air pollutant (HAP) service. In addition, the EPA is taking final action to add standards for pressure relief devices (PRDs) and pressure vessels; require electronic reporting for notification of compliance status (NOCS), performance test reports, and periodic reports; and require continuous performance testing of non-flare air pollution control devices (APCD). The EPA is not finalizing the proposed area source category for chemical manufacturing with ethylene oxide (EtO) or related standards at this time.

DATES: This final rule is effective on April 1, 2026. The Director of the Federal Register (FR) has approved incorporation by reference of certain publications listed in the rule as of April 1, 2026.

ADDRESSES: The EPA established a docket for this action under Docket ID No. EPA-HQ-OAR-2024-0303. All documents in the docket are available at <https://www.regulations.gov>. Although listed, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. The EPA does not place certain other material, such as copyrighted material, on the internet; this material is publicly available only as portable document format (PDF) versions accessible only on EPA computers in the docket office reading room. The public cannot download certain databases and physical items from the docket but may request these items by contacting the

docket office at (202) 566-1744. The docket office has 10 business days to respond to these requests. With the exception of such material, publicly available docket materials are available electronically at <https://www.regulations.gov> or on the EPA computers in the docket office reading room at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Time (ET), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact U.S. EPA, Attn: William Gallagher, Mail Drop: Industrial Processing and Power Division (E140C), 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2336; and email address: Gallagher.William@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this notice the use of “we,” “us,” or “our” refers to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AMEL Alternative Means of Emission Limitation
 APCD air pollution control device
 CAA Clean Air Act
 CDX Central Data Exchange
 CEDRI Compliance and Emissions Data Reporting Interface
 CFR Code of Federal Regulations
 CMAS Chemical Manufacturing Area Source(s)
 CMPU chemical manufacturing process unit
 EAV equivalent annualized value
 EPA Environmental Protection Agency
 ERT Electronic Reporting Tool
 EtO ethylene oxide
 FR Federal Register
 GACT generally available control technology
 gpm gallons per minute
 G/V gas/vapor
 HAP hazardous air pollutant(s)
 HL heavy liquid
 HON Hazardous Organic NESHAP
 ICR information collection request
 kPa kilopascal(s)
 LDAR leak detection and repair
 LDSN leak detection and sensor network
 LL light liquid
 MACT maximum achievable control technology

MON Miscellaneous Organic Chemical Manufacturing NESHAP
 NAICS North American Industry Classification System
 NESHAP national emission standards for hazardous air pollutants
 NOCS notification of compliance status
 NRDC Natural Resources Defense Council
 NTTAA National Technology Transfer and Advancement Act
 OAR Office of Air and Radiation
 OGI optical gas imaging
 OMB Office of Management and Budget
 OSHA Occupational Safety and Health Administration
 PDF portable document format
 PEPO Polyether Polyols
 ppmv parts per million by volume
 ppmw parts per million by weight
 PRA Paperwork Reduction Act
 PRD pressure relief device
 PV present value
 RFA Regulatory Flexibility Act
 RTR risk and technology review
 tpy tons per year
 UMRA Unfunded Mandates Reform Act
 U.S.C. United States Code
 VCS voluntary consensus standards
 VOC volatile organic compound(s)

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Background information. On January 22, 2025, the EPA proposed revisions to the CMAS NESHAP based on the Agency's technology review undertaken pursuant to CAA section 112(d)(6).¹ In that action, the EPA also proposed to list and establish standards, pursuant to CAA sections 112(c)(3) and (d)(5) respectively, for a new source category for area sources that produce a material or family of materials described by North American Industry Classification System (NAICS) code 325 using EtO.²

In this final rule, the EPA is establishing standards for existing CMAS categories based on the CAA section 112(d)(6) technology review. This preamble summarizes some of the more significant comments the EPA received regarding the proposed CAA section 112(d)(6) technology review and provides the Agency's responses. A summary of all other public comments on the proposed CAA section 112(d)(6) technology review and the EPA's responses to those comments are in the document *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for

this rulemaking.³ A “track changes” version of the regulatory language that incorporates the changes in this action is also in the docket for this rulemaking.

The EPA is not taking final action at this time on the proposed listing and regulation of EtO from area sources producing a material or family of materials described by NAICS code 325. The EPA received numerous comments and information both in favor of and opposed to the proposed listing and regulation of EtO from area sources that produce a material or family of materials described by NAICS code 325 (chemical manufacturing), and the Agency needs additional time to consider those comments before taking final action. The EPA intends to coordinate a final action on this issue with the regulation of EtO from major sources of HAP. The EPA will address EtO-specific comments on the proposed listing and regulation when the Agency takes final action on those portions of the proposal.

I. General Information

A. Executive Summary

In 2009, the EPA promulgated standards to regulate HAP emissions of 15 air toxics from CMAS pursuant to CAA section 112(c)(3) and (k)(3). In 2012, the EPA granted and finalized reconsideration of the CMAS NESHAP in response to petitioner concerns on topics such as title V permitting, overlap provisions, leak inspections, requirements for covers and lids, and the applicability of the NESHAP. As part of the 2012 rules, the EPA proposed and finalized additional standards for periods of startup, shutdown, and malfunction, metal HAP process vents, and technical corrections.

CAA section 112(d)(6) requires the EPA to review and revise emission standards “as necessary” no less often than every eight years (*i.e.*, a technology review). On January 22, 2025, the EPA proposed changes to the CMAS NESHAP and solicited public comment.⁴ This final action fulfills the EPA's obligation under CAA section 112(d)(6) and an associated consent decree. The EPA proposed addressing EtO emissions from area source

chemical manufacturers by proposing to list a new area source category and proposing EtO-specific standards for several emission process groups. In addition, the EPA proposed more general standards and management practices to address fugitive emissions from CMAS chemical manufacturing process units (CMPUs), including updates to water monitoring methods for heat exchange systems, an instrument monitoring program, and new standards for PRDs and pressure vessels. Also, the EPA proposed several changes to align the CMAS NESHAP with other, similar chemical sector rules. The proposed changes included establishing electronic reporting, requiring regular performance testing, restricting bypasses, and removing certain affirmative defense provisions.

In this final rule, the EPA is finalizing the non-EtO provisions as proposed with only clarifying changes and technical corrections. The EPA determined that the costs of the final revisions are reasonable and not overly burdensome based on the Agency's technical analyses, which are available in the docket, and on the Agency's assumption that CMAS CMPUs operate similarly to CMPUs subject to major source NESHAP.⁵ While commenters expressed some concerns with the proposed standards, the EPA did not receive sufficient information to change the analyses. The EPA is not taking final action on the proposed EtO area source category and emission standards at this time.

The EPA estimates that this action will have present value (PV) costs of \$72 million at a three percent discount rate and \$56 million at a seven percent discount rate over the 2027 to 2041 timeframe (in 2024 dollars). The EPA estimates that the final action will have an equivalent annualized value (EAV) of \$6.1 million and \$6.2 million per year at the same discount rates, respectively (in 2024 dollars).

B. Does this action apply to me?

Regulated entities. Table 1 of this preamble lists categories and entities potentially regulated by this action.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and source categories	NAICS code
Agricultural Chemicals and Pesticides Manufacturing	325311, 325312, and 325320.
Cyclic Crude and Intermediate Production	32511 and 325120.
Industrial Inorganic Chemical Manufacturing	325120, 325130, and 32518.
Industrial Organic Chemical Manufacturing	325130, 32519, 3256, and 3259.

¹ 90 FR 7942 (Jan. 22, 2025).

² *Id.*

³ Docket ID No. EPA-HQ-OAR-2024-0303.

⁴ 90 FR 7942 (Jan. 22, 2025).

⁵ Docket ID No. EPA-HQ-OAR-2024-0303.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION—Continued

NESHAP and source categories	NAICS code
Inorganic Pigments Manufacturing	325130.
Miscellaneous Organic Chemical Manufacturing	325130, 32519, 3256, and 3259.
Pharmaceutical Production Manufacturing	325411, 325412, and 325414.
Plastic Materials and Resins	325211.
Synthetic Rubber Manufacturing	325212.

The EPA does not intend table 1 of this preamble to be exhaustive but rather to provide a guide for readers regarding entities that this final action likely affects for the source categories listed. To determine if this action affects your facility, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

C. What is the statutory authority for this final action?

CAA section 112, as amended (42 U.S.C. 7401 *et seq.*), provides the statutory authority for this final action. CAA section 112(d)(6) requires the EPA to review technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less often than every eight years following promulgation of those standards. The EPA must conduct this “technology review” for standards established under CAA section 112(d), including generally available control technology (GACT) standards that apply to area sources.⁶ This action finalizes the CAA section 112(d)(6) technology review for the nine area source categories affected by the CMAS NESHAP.

Several additional CAA sections are relevant to this action, as they specifically address regulation of HAP emissions from area sources. Collectively, CAA sections 112(c)(3), (d)(5), and (k)(3) are the basis of the Area Source Program under the Urban Air Toxics Strategy, which provides the framework for regulation of area sources under CAA section 112.

CAA section 112(k)(3)(B) requires the EPA to identify at least 30 HAP that pose the greatest potential health threat in urban areas with a primary goal of achieving a 75 percent reduction in

cancer incidence attributable to HAP emitted from stationary sources. As discussed in the Integrated Urban Air Toxics Strategy, the EPA identified 30 HAP emitted from area sources that pose the greatest potential health threat in urban areas, and these HAP are commonly referred to as the “30 urban HAP.”⁷

CAA section 112(c)(3), in turn, requires the EPA to list sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 urban HAP are subject to regulation. The EPA implemented these requirements through the Integrated Urban Air Toxics Strategy by identifying and setting standards for categories of area sources, including the nine CMAS categories that are addressed in this action.⁸

CAA section 112(d)(5) provides that for area source categories, the EPA may promulgate standards or requirements for area sources “which provide for the use of generally available control technology or management practices [GACT] by such sources to reduce emissions of hazardous air pollutants” in lieu of setting maximum achievable control technology (MACT) standards (which are generally required for major source categories). In developing GACT standards, the EPA evaluates the control technologies and management practices that reduce HAP emissions that are generally available for each area source category. Consistent with the legislative history, the EPA can consider costs and economic impacts in determining what constitutes GACT.⁹ The EPA set GACT standards for the nine CMAS categories in 2009.¹⁰

D. Where can I get a copy of this document and other related information?

In addition to the docket, an electronic copy of this final action is available on the internet at <https://www.epa.gov/stationary-sources-air-pollution/chemical-manufacturing-area->

sources-national-emission-standards. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

E. Judicial Review and Administrative Reconsideration

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by June 1, 2026. Under CAA section 307(b)(2), a party cannot challenge the requirements established by this final rule separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

CAA section 307(d)(7)(B) further provides that only an objection to a rule or procedure which a party raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

F. Severability

This final rule contains several discrete components, which the EPA views as severable as a practical matter—*i.e.*, they are functionally independent and will operate in

⁶ For categories of area sources subject to GACT standards, CAA sections 112(d)(5) and (f)(5) do not require the EPA to conduct a residual risk review pursuant to CAA section 112(f)(2). However, the EPA must conduct periodic technology reviews under CAA section 112(d)(6).

⁷ 64 FR 38706, 38715 (July 19, 1999).

⁸ *See id.*

⁹ Sen. Rep. No. 101–228 (1989).

¹⁰ 74 FR 56008 (Oct. 29, 2009).

practice without relying on the other components. Sections III.A through III.C of this preamble and the technical memoranda available in the docket provide detail about these discrete components. In addition, as this final rule revises an existing NESHAP, the standards promulgated in the 2012 final rule would remain in place in the event of an adverse result upon judicial review of this final rule.

II. Background

A. What are the CMAS categories, and how does the NESHAP regulate HAP emissions from the source categories?

The source categories that are the subject of this final action are the Agricultural Chemicals and Pesticides Manufacturing, Cyclic Crude and Intermediate Production, Industrial Inorganic Chemical Manufacturing, Industrial Organic Chemical Manufacturing, Inorganic Pigments Manufacturing, Miscellaneous Organic Chemical Manufacturing, Pharmaceutical Production, Plastic Materials and Resins Manufacturing, and Synthetic Rubber Manufacturing source categories. The EPA promulgated the CMAS NESHAP on October 29, 2009, and codified the NESHAP at 40 Code of Federal Regulations (CFR) part 63, subpart VVVVVV.¹¹ As promulgated in 2009 and amended on December 21, 2012, the CMAS NESHAP regulates CMPUs at an area source of HAP emissions if HAP listed in table 1 to 40 CFR part 63, subpart VVVVVV are used as a feedstock, generated as a byproduct, or generated as a product by the CPU.¹² A CPU includes all process vessels, equipment, and activities necessary to operate a chemical manufacturing process that produces a material or a family of materials described by NAICS code 325, subject to certain exclusions.¹³ A CPU consists of one or more-unit operations and any associated recovery devices. A CPU also includes each storage tank, transfer operation, surge control vessel, and bottoms receiver associated with the production of such NAICS code 325 materials. The affected source is the facility-wide collection of CMPUs, and

each heat exchange system and wastewater system associated with a CPU that contains one of the table 1 HAP.

The nine affected CMAS categories encompass facilities that use as feedstocks, generate as byproducts, or produce as products any of the following 15 HAP: 1,3-butadiene; 1,3-dichloropropene; acetaldehyde; chloroform; ethylene dichloride; hexachlorobenzene; methylene chloride; quinoline (these eight HAP are referred to as the “Table 1 organic HAP”); compounds of arsenic, cadmium, chromium, lead, manganese, or nickel (these six HAP are referred to as the “Table 1 metal HAP”); or hydrazine.^{14 15} In this preamble, we refer to the nine source categories collectively as the CMAS categories. Descriptions of the nine source categories are as follows:

Agricultural Chemicals and Pesticides Manufacturing. NAICS codes 325311 (nitrogenous fertilizer manufacturing), 325312 (phosphatic fertilizer manufacturing), and 325320 (pesticide and other agricultural chemical manufacturing) define the agricultural chemicals and pesticides manufacturing source category. Products of this industry include nitrogenous and phosphatic fertilizer materials including anhydrous ammonia, nitric acid, ammonium nitrate, ammonium sulfate, urea, phosphoric acid, superphosphates, ammonium phosphates, and calcium metaphosphates. The source category also includes the formulation and preparation of ready-to-use agricultural and household pest control chemicals from technical chemicals or concentrates, the production of concentrates which require further processing before use as agricultural pesticides, and the manufacturing or formulating of other agricultural chemicals such as minor or trace elements and soil conditioners.

Organic Chemical Production. This section discusses cyclic crude and intermediate production, industrial organic chemical manufacturing, and miscellaneous organic chemical manufacturing source categories collectively because there is considerable overlap in the NAICS codes that apply to these source categories. These source categories include cellulosic organic fiber manufacturing as well as other source categories designated by NAICS codes 32511 (petrochemical manufacturing), 325130 (synthetic dye and pigment

manufacturing), 32519 (other basic organic chemical manufacturing), and 3256 (soap, cleaning compound, and toilet preparation manufacturing). The source category also includes organic gases designated by NAICS code 325120 (industrial gas manufacturing) and production of chemicals such as explosives and photographic chemicals designated by NAICS code 3259 (other chemical product and preparation manufacturing). Raw materials for this industry include, for example, refined petroleum chemicals, coal tars, and wood. The industry manufactures a wide variety of final products as well as numerous chemicals that are used as feedstocks to produce these final products and products in other chemical manufacturing source categories. Examples of types of products include solvents, organic dyes and pigments, plasticizers, alcohols, detergents, and flavorings.

Industrial Inorganic Chemical Manufacturing. NAICS code 325120 (industrial gas manufacturing), manufacturing of inorganic dyes that are designated by NAICS code 325130 (synthetic dye and pigment manufacturing), and most manufacturing designated by NAICS code 325180 (other basic inorganic chemical manufacturing) define the industrial inorganic chemical manufacturing source category. The NESHAP excludes certain NAICS code 325180 productions such as carbon black and mercury cell chlor-alkali production, which are separate source categories.

Inorganic Pigment Manufacturing. Inorganic pigments are part of NAICS code 325130 (synthetic dye and pigment manufacturing). Most inorganic pigments are oxides, sulfides, oxide hydroxides, silicates, sulfates, or carbonates that normally consist of single component particles. Inorganic pigment manufacturing processes can generally be divided between those that use partial combustion and those that use pure pyrolysis. Manufacturers mainly use inorganic pigments to impart colors to a variety of compounds. They may also impart properties of rust inhibition, rigidity, and abrasion resistance. Inorganic pigments are generally insoluble and remain unchanged physically and chemically when mixed with a carrier. Pigment manufacturers supply inorganic colors in a variety of forms including powders, pastes, granules, slurries, and suspensions. Manufacturers of paints and stains, printing inks, plastics, synthetic textiles, paper, cosmetics, contact lenses, soaps, detergents, wax, modeling clay, chalks, crayons, artists’

¹¹ 74 FR 56008 (Oct. 29, 2009).

¹² 74 FR 56008 (Oct. 29, 2009); 77 FR 75740 (Dec. 21, 2012).

¹³ Exclusions: (1) processes classified in NAICS Code 325222, 325314, 325413, or 325998; (2) processes subject to standards for other listed area source categories in NAICS 325; (3) certain fabricating operations; (4) manufacture of photographic film, paper, and plate where material is coated or contains chemicals (but the manufacture of the photographic chemicals is regulated); and (5) manufacture of radioactive elements or isotopes, radium chloride, radium luminous compounds, strontium, and uranium.

¹⁴ Feedstocks are reactants, solvents, or any other additives to the process.

¹⁵ “Table 1” refers to table 1 to the CMAS NESHAP.

colors, concrete, masonry products, and ceramics use these pigments for those products.

Pharmaceutical Production. The pharmaceutical manufacturing source category consists of chemical production operations that produce drugs and medication. These operations include chemical synthesis (deriving a drug's active ingredient) and chemical formulation (producing a drug in its final form). NAICS codes 325411 (medicinal and botanical manufacturing), 325412 (pharmaceutical preparation manufacturing), and 325414 (biological product, except diagnostic, manufacturing) define the source category.

Plastic Materials and Resins Manufacturing. NAICS code 325211 (plastics material and resin manufacturing) designates the plastic materials and resins manufacturing source category. Examples of products in this source category include epoxy resins, nylon resins, phenolic resins, polyesters, polyethylene resins, and styrene resins. The source category does not include polyvinyl chloride and copolymers production, which is a separate source category.

Synthetic Rubber Manufacturing. NAICS code 325212 (synthetic rubber manufacturing) defines the synthetic rubber manufacturing source category. Facilities in this source category manufacture synthetic rubber or vulcanizable elastomers by polymerization or copolymerization. For this source category, an elastomer is defined as a rubber-like material capable of vulcanization, such as copolymers of butadiene and styrene, copolymers of butadiene and acrylonitrile, polybutadienes, chloroprene rubbers, and isobutylene-isoprene copolymers.

The HAP emission sources at facilities subject to the CMAS NESHAP include process vents, storage tanks, equipment leaks, transfer operations, and wastewater. Additionally, some facilities have cooling towers or other heat exchangers. The GACT standards for CMAS include emission standards in the form of management practices for each CPMU as well as emission limits for certain emission sources including process vents and storage tanks. The rule also establishes management practices and other emission reduction requirements for wastewater systems and heat exchange systems.

As of September 1, 2025, the EPA identified 251 facilities in operation that are subject to the CMAS NESHAP. In this preamble, the EPA refers to these facilities collectively as “CMAS facilities.” The document entitled *List of Facilities Subject to the CMAS NESHAP*,

which is in the docket for this rulemaking, presents the list of CMAS facilities located in the United States that are part of the CMAS categories with processes subject to the CMAS NESHAP.¹⁶ The EPA notes that where the Agency refers to “area source chemical manufacturers,” we are referring to area sources that manufacture chemicals but are not subject to the CMAS NESHAP.

B. What changes did we propose for the CMAS categories in our January 22, 2025, proposal?

This section provides a brief summary of the EPA's proposed revisions to the CMAS NESHAP.¹⁷ For additional background information, such as how the EPA developed the facility list, refer to section II of the proposal preamble.¹⁸ For descriptions of how the EPA determined GACT and how the EPA conducted the technology review, refer to section III of the proposal preamble.¹⁹

1. Proposed Actions Related to CAA Section 112(d)(5) for Organic HAP

The EPA proposed first-time requirements under CAA section 112(d)(5) for pressure vessels, PRDs, and closed vent systems containing bypass lines. Specifically, the EPA proposed:

- new monitoring requirements for pressure vessels in organic HAP service,
- new management practices for emissions from PRDs in organic HAP service, and
- expressly prohibiting bypassing an APCD.

2. Proposed Actions Related to CAA Section 112(d)(6) Technology Review

Pursuant to the CAA section 112(d)(6) technology review for the CMAS NESHAP, the EPA proposed that no revisions to the current standards are necessary for wastewater, storage tanks, transfer operations, or flares. However, the EPA proposed additional changes under CAA section 112(d)(6) for equipment leaks, heat exchange systems, and certain process vents.

- For equipment leaks at new and existing affected sources, the EPA proposed that owners and operators

with equipment in organic HAP service must monitor pumps in light liquid (LL) service, valves in gas/vapor (G/V) service and LL service, and connectors in G/V service and LL service annually via EPA Method 21 with a leak definition of 10,000 parts per million by volume (ppmv). Additionally, the EPA proposed to incorporate the monitoring requirements from 40 CFR part 63, subpart H for compressors, sampling connection systems, open-ended valves or lines, equipment in heavy liquid (HL) service, closed vent systems and control devices, and agitators in organic HAP service.

- For heat exchange systems in organic HAP service with flow rates greater than or equal to 8,000 gallons per minute (gpm), the EPA proposed requirements that owners or operators conduct quarterly monitoring (after an initial six months of monthly monitoring if not already completed) using the Modified El Paso Method and a leak definition of 6.2 ppmv of total strippable hydrocarbon concentration (as methane) in the stripping gas.²⁰

- For process vents, the EPA proposed to remove the 50 ppmv concentration threshold from the definition of “metal HAP process vent.”

Other Proposed Actions

In addition to the actions described in sections II.B.1 and II.B.2 of this preamble, the EPA proposed:

- to change the recordkeeping and reporting requirements to require the use of the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI) for notifications of compliance status (NOCS), performance test reports, and periodic reports;
- to remove affirmative defense provisions from the CMAS NESHAP in compliance with *Natural Resources Defense Council (NRDC) v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014);
- to require subsequent performance testing once every five years to demonstrate compliance with emission limits for certain process vents;
- to remove an exemption for certain wastewater streams during periods of startup and shutdown;
- to revise the phrasing used in 40 CFR 63.11502(a) to refer to NESHAP

¹⁶ Docket ID No. EPA-HQ-OAR-2024-0303-0028.

¹⁷ On May 24, 2022, the EPA received a complaint alleging that the Agency failed to undertake non-discretionary duties related to the technology review of the CMAS NESHAP. As a result, on December 19, 2023, the EPA entered into a consent decree to finalize a technology review of the CMAS NESHAP by September 17, 2025, later amended by stipulations to March 31, 2026. The EPA issued the 2025 proposal as part of the Agency's efforts to fulfill the consent decree and the Agency's statutory obligations.

¹⁸ 90 FR 7942 (Jan. 22, 2025).

¹⁹ *Id.*

²⁰ The Modified El Paso Method uses a dynamic or flow-through system for air stripping a sample of the water and analyzing the resultant off-gases for VOC using a common flame ionization detector analyzer. Appendix P of the Texas Commission on Environmental Quality's Sampling Procedures Manual: The Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound (VOC) Emissions from Water Sources describes this method in detail. Appendix P is in the docket for this rulemaking (see Docket ID No. EPA-HQ-OAR-2024-0303-0030).

subpart F in instances where a definition in the CMAS NESHAP points to either NESHAP subpart G or H; and

- to make other technical and editorial corrections for the CMAS NESHAP.

C. What outreach did we conduct following the proposal?

As part of this rulemaking, the EPA conducted listening sessions with representatives of CMAS facility owners and operators through meetings with the American Chemistry Council and Harcos Chemicals Inc. in September 2025. Additional details about these meetings are in the document *Documentation of Meetings with Industry Stakeholders—August and September*, which is in the docket for this rulemaking.²¹

III. What is included in this final rule?

In this action, the EPA is finalizing the Agency's determinations pursuant to the technology review provisions of CAA section 112 for the CMAS categories and amending the CMAS NESHAP based on those determinations (see sections III.A and III.B of this preamble). The EPA also is finalizing other changes to the CMAS NESHAP described in section III.C of this preamble. This action also reflects several changes from the January 22, 2025, proposal in consideration of comments received during the public comment period as described in section IV of this preamble. For the EPA's complete responses to the submitted comments, please see the document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources* in the docket for this rulemaking.

The EPA is not taking final action on the proposed listing and regulation of EtO emissions from chemical manufacturing area sources because the Agency needs additional time to consider the comments on the proposed listing and regulation of such emissions and because the Agency wants to coordinate the regulation of EtO emissions from area sources with the regulation of such emissions from major sources. The proposed rule distinguished the new listing and regulation of EtO emissions from the mandatory technology review of the CMAS rule. The EPA listed CMAS categories for specific HAP emissions as part of the Urban Air Toxics program under CAA sections 112(c)(3) and

112(k)(3)(B), and EtO emissions were not in that listing. For that reason, the EPA's responsibility under CAA section 112(d)(6) and the consent decree do not apply to the listing and regulation of EtO emissions from chemical manufacturing area sources. Thus, the Agency is deferring a final decision on the proposed listing and regulation of EtO emissions at this time.

A. What are the final rule amendments pursuant to CAA section 112(d)(5) for organic HAP?

For pressure vessels, the EPA is finalizing, as proposed, the definition for pressure vessel by reference to the Hazardous Organic NESHAP (HON) at 40 CFR 63.101, the removal of the exemption for "pressure vessels designed to operate in excess of 204.9 kilopascals (kPa) and without emissions to the atmosphere," from the definition of a storage tank, and a no detectable emissions requirement for pressure vessels (*i.e.*, each point on the pressure vessel where total organic HAP could potentially be emitted must have an instrument reading less than 500 ppmv). The no detectable emissions provisions also require initial and annual monitoring using EPA Method 21 of 40 CFR part 60, Appendix A-7 and routing organic HAP through a closed vent system to a control device (*i.e.*, no releases to the atmosphere through any points on the pressure vessel).

For PRDs, the EPA is finalizing, as proposed, the incorporation of various practices to minimize emissions from PRD releases and leaks. Specifically, the EPA is finalizing PRD management practices that require owners and operators to monitor PRDs in organic HAP service for leaks after placing a PRD into organic HAP service following a pressure release from the PRD. These final provisions also require, as proposed, owners and operators to implement preventative measures, perform root cause analysis and corrective action if a PRD releases directly to atmosphere, and monitor PRDs such that the time and duration of each pressure release can be recorded. The EPA is also finalizing the Agency's proposed definitions for "pressure relief device or valve" and "pressure release" without changes.

For closed vent systems with bypass lines, the EPA is finalizing, as proposed, that owners and operators may not bypass the APCD at any time and that doing so is a deviation from the emission standards. The EPA is also finalizing, as proposed, that the use of a cap, blind flange, plug, or second valve on open-ended valves or lines is sufficient to prevent a bypass. Lastly,

the EPA is finalizing, as proposed, the removal of the exemption for gas streams exiting analyzers.

B. What are the final rule amendments based on the technology review for the CMAS categories?

For equipment leaks in the CMAS categories, the EPA determined that there are developments in practices, processes, and control technologies that warrant revisions to the GACT standards in the CMAS NESHAP pursuant to CAA section 112(d)(6). After considering public input, the EPA is finalizing the proposed instrument monitoring program (*i.e.*, annual monitoring of pumps in LL service, valves in G/V and LL service, and connectors in G/V and LL service) using a leak definition of 10,000 ppmv. Additionally, the EPA is finalizing the Agency's proposal to incorporate all the requirements from 40 CFR part 63, subpart H for compressors, sampling connections systems, open-ended valves or lines, equipment in HL service, closed vent systems and control devices, and agitators.

For heat exchange systems in the CMAS categories, the EPA determined that there are developments in practices, processes, and control technologies that warrant revisions to the GACT standards in the CMAS NESHAP pursuant to CAA section 112(d)(6). After considering public input, the EPA is finalizing the proposed GACT standards, requiring owners and operators to conduct quarterly monitoring for new and existing heat exchange systems with flowrates greater than or equal to 8,000 gpm (after an initial six months of monthly monitoring if not already completed) using the Modified El Paso Method and repair leaks of total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or greater without changes. The EPA is also finalizing, as proposed, that owners and operators may use the current leak monitoring requirements for heat exchange systems at 40 CFR 63.104(b) in lieu of using the Modified El Paso Method, provided that 99 percent by weight or more of the organic compounds that could leak into the heat exchange system are water soluble and have a Henry's Law Constant less than 5.0E-6 atmospheres-cubic meters per mole at 25 degrees Celsius.

For process vents in the CMAS categories, the EPA determined that there are developments in practices, processes, and control technologies that warrant revisions to the GACT standards in the CMAS NESHAP pursuant to CAA section 112(d)(6). After

²¹ Docket ID No. EPA-HQ-OAR-2024-0303-0084.

considering public input, the EPA is revising the definition of “metal HAP process vent” to remove the 50 ppmv metal HAP concentration threshold, as proposed.

For storage tanks, wastewater streams, and transfer operations in the CMAS categories, the EPA is finalizing its proposed determination in the technology review that there are no developments in practices, processes, and control technologies that warrant revisions to the GACT standards. The EPA notes that the Agency is finalizing standards for pressure vessels pursuant to CAA section 112(d)(5) (see section III.A of this preamble), which eliminates their exemption from the definition of “storage tank” in the CMAS NESHAP.

Section III.D of this preamble provides a detailed discussion of the effective and compliance dates for the requirements the EPA is finalizing in this action for the CMAS NESHAP. Section IV.B.3 of this preamble provides a summary of key comments the EPA received on the CAA section 112(d)(6) provisions and the Agency’s responses.

C. What other changes have we made to the NESHAP?

This rule also finalizes, as proposed, revisions to several other CMAS NESHAP requirements. The EPA describes these revisions in this section as well as other proposed provisions that have changed since the proposal.

To increase the ease and efficiency of data submittal and data accessibility, the EPA is finalizing, as proposed, a requirement that owners or operators submit electronic copies of certain required performance test reports, NOCS, and periodic reports through the EPA’s CDX using the CEDRI. The document *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in the docket for this rulemaking, provides a description of the electronic data submissions process.²² The final rule requires that owners and operators submit performance test results in the format generated through the use of the EPA’s Electronic Reporting Tool (ERT) or an electronic file consistent with the XML schema on the ERT website.²³ Electronic files consistent with the XML schema on the ERT website must accompany all information required by 40 CFR 63.7(g)(2) in PDF format. For periodic

reports, the final rule requires that owners or operators use the appropriate spreadsheet template to submit information to CEDRI. The EPA has made minor clarifying edits to the spreadsheet templates based on comments received during the public comment period. The final version of the template for these reports will be available on the CEDRI website.²⁴ The final rule requires that owners or operators submit NOCS as a PDF upload in CEDRI. For a more detailed discussion of these final amendments, see section IV.D.1 of the proposal preamble and sections IV.C and VI.C of this preamble.

The EPA also is finalizing, as proposed, initial and recurring performance testing to demonstrate compliance with certain process vent and storage tank provisions. Additionally, the EPA proposed and is finalizing the removal of the design evaluation and engineering assessment options for process vents in organic HAP service or metal HAP service, respectively. Additionally, consistent with *NRDC*, the EPA is finalizing, as proposed, the elimination of the affirmative defense provisions at 40 CFR 63.11501(e) and the definition of “affirmative defense” in 40 CFR 63.11502(b).

Lastly, the EPA is finalizing many of the revisions that the Agency proposed for clarifying text or correcting typographical errors, grammatical errors, and cross-reference errors. These include but are not limited to specifying which version of NAICS codes to reference when reviewing applicability per 40 CFR 63.11494(c)(2)(iv), removing redundant provisions at 40 CFR 63.11496(g)(5), and adding headings at 40 CFR 63.11497(a) and (c). Section IV.D.3 of the proposal preamble discusses the proposed editorial corrections and clarifications. The document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contains the comments on these changes and the EPA’s specific responses to these items.

D. What are the effective and compliance dates of the standards?

For the requirements the EPA is finalizing under CAA sections 112(d)(5) and (6), all existing affected sources and all affected sources that were new sources under the previous CMAS NESHAP (*i.e.*, sources that commenced

construction or reconstruction after October 6, 2008, and on or before January 22, 2025), must comply with all of the amendments no later than April 1, 2029, or upon startup, whichever is later, as proposed. For existing sources, CAA section 112(i) provides that the compliance date for standards promulgated under CAA section 112(d) shall be as expeditious as practicable but no later than three years after the effective date of the standard.²⁵ The EPA agrees with the commenters that owners and operators need three years to implement the requirements the Agency is finalizing under CAA sections 112(d)(5) and (6).²⁶ This rulemaking impacts 251 sources, many of which may be addressing fugitive emissions from certain sources for the first time (*e.g.*, implementing an instrument monitoring program for equipment leaks). Facilities need time to purchase and install additional equipment or systems, such as preventative measures for PRDs. Additionally, the number of CMAS facilities that are near one another could potentially strain certain local resources such as LDAR contractors or equipment vendors. Owners, operators, and relevant authorities may also need to update permits (*e.g.*, New Source Review and/or title V operating permit modifications) to account for the additional NESHAP requirements. Moreover, we recognize that owners and operators may need at least three years to understand the final rule changes; revise site guidance and compliance programs; ensure operations can meet the standards during startup and shutdown; update operation, maintenance, and monitoring plans; and upgrade emissions capture and control systems.

As provided in CAA section 112(i) and 5 U.S.C. 801(a)(3), all new affected sources that commenced construction or reconstruction after January 22, 2025, must comply with all requirements under CAA sections 112(d)(5) and (6) by April 1, 2026, or upon startup, whichever is later. The EPA provided additional rationale for these compliance dates in the preamble to the proposed rule. For the EPA’s complete responses regarding compliance dates, please see section 6.0 of the document

²⁵ *Ass’n of Battery Recyclers v. EPA*, 716 F.3d 667, 672 (D.C. Cir. 2013) (“Section 112(i)(3)’s three-year maximum compliance period applies generally to any emission standard . . . promulgated under [section 112].”).

²⁶ See section 6.0 of the document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources* in the docket for this rulemaking.

²² Docket ID No. EPA–HQ–OAR–2024–0303–0006.

²³ <https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>.

²⁴ <https://www.epa.gov/electronic-reporting-air-emissions/cedri>.

entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources* in the docket for this rulemaking.

The EPA is also finalizing provisions that allow up to 150 days after the publication date of the final rule for owners or operators of affected sources to comply with the requirement to submit NOCS reports electronically. The EPA is finalizing, as proposed, provisions that allow 60 days after the publication date of the final rule for owners or operators of affected sources to comply with the requirement to submit the results of performance tests electronically, and three years after the publication date of the final rule for owners or operators of affected sources to comply with the requirement to submit periodic reports electronically.

IV. What is the rationale for our final decisions and amendments for the CMAS categories?

For each issue, this section provides a description of what the EPA proposed and what the Agency is finalizing, the EPA's rationale for the final decisions and amendments, and a summary of key comments and responses. For all comments not discussed in this preamble, the document *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contains the comment summaries and the EPA's responses to those comments.

A. Amendments Pursuant to CAA Section 112(d)(5) for Organic HAP for the CMAS Categories

What did we propose pursuant to CAA section 112(d)(5) for organic HAP for the CMAS categories?

Based on the EPA's review of existing standards affecting CMPUs in the CMAS categories, the Agency proposed under CAA section 112(d)(5) additional standards for pressure vessels, PRDs, and closed vent systems containing bypass lines. The EPA provides a summary of the Agency's findings, as proposed, in this section.

a. Pressure Vessels

The EPA proposed to define pressure vessel at 40 CFR 63.11502(a)—by reference to 40 CFR 63.101—to mean “a storage vessel that is used to store liquids or gases and is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the pressure vessel during filling of the pressure vessel to its design capacity”

and to remove the exemption for “pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere” from the definition of storage tank in 40 CFR 63.11502(b). The EPA also proposed to require no detectable emissions at all times (*i.e.*, each point on the pressure vessel where total organic HAP could potentially be emitted must have an instrument reading less than 500 ppmv) at 40 CFR 63.11497(f) and item 6 of table 5 to the CMAS NESHAP; initial and annual monitoring using EPA Method 21 of 40 CFR part 60, Appendix A–7; and routing organic HAP through a closed vent system to a control device (*i.e.*, no releases to the atmosphere through any points on the pressure vessel).

b. PRDs

The EPA proposed requirements at 40 CFR 63.11495(a)(6)(iv) (incorporating 40 CFR 63.165(e)(1) through (8)) that owners and operators must: (1) operate each PRD in organic HAP gas or vapor service with less than a 500 ppm difference above background as measured by the method specified in 40 CFR 63.180(c); (2) conduct instrument monitoring no later than five calendar days after the PRD returns to organic HAP gas or vapor service following a pressure release or, if applicable, install a replacement rupture disk as soon as practicable after a pressure release, but no later than five calendar days after the pressure release; (3) implement at least three prevention measures; (4) perform root cause analysis and corrective action if a PRD releases emissions directly to the atmosphere; and (5) monitor PRDs using a system that can identify and record the time and duration of each pressure release and notify operators when a pressure release occurs. The EPA also proposed to define “pressure relief device or valve” at 40 CFR 63.11502(a)—by reference to the HON (40 CFR 63.101)—to mean “a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid safety hazards or equipment damage. A PRD discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected causes. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices. Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.” In addition, the EPA

proposed to define “pressure release” at 40 CFR 63.11502(a)—by reference to the HON (40 CFR 63.101)—to mean “the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.”²⁷ This release can be one release or a series of releases over a short time period.”

c. Closed Vent Systems Containing Bypass Lines

The EPA proposed at 40 CFR 63.11495(e) that an owner or operator may not bypass an APCD at any time, that a bypass is an emission standard deviation, and that owners and operators must estimate, maintain records of, and report the quantity of organic HAP released. The EPA also proposed that the use of a cap, blind flange, plug, or second valve on open-ended valves or lines (following the requirements specified in 40 CFR 60.482–6(a)(2), (b), and (c) or following requirements codified in another regulation that are the same as 40 CFR 60.482–6(a)(2), (b), and (c)) is sufficient to prevent a bypass. Lastly, the EPA proposed to remove the exemption for gas streams exiting analyzers from the definition of continuous process vent at 40 CFR 63.11502(b) and to clarify at 40 CFR 63.11495(e) that analyzer vents are not exempt from the continuous process vent standards.

2. How did the new standards for organic HAP from the CMAS categories change?

Except for a clarification regarding the pressure vessel provisions, the EPA is finalizing the new standards pursuant to CAA section 112(d)(5) as proposed. For pressure vessels, based on a comment received during the public comment period, the EPA is revising the final requirements at 40 CFR 63.11497(e)(2) to clarify that the unsafe and difficult/inaccessible monitoring provisions apply to components on pressure vessels as well. Notably, the EPA proposed to include unsafe and difficult/inaccessible monitoring provisions via reference to 40 CFR 63.168(h) and (i) (for valves in G/V and in LL service) and 40 CFR 63.174(f) and (h) (for connectors in G/V and in LL service). However, the EPA's revisions instead incorporate the unsafe and difficult/inaccessible monitoring provisions the Agency proposed and is finalizing as part of the final instrument monitoring program for equipment leaks

²⁷ The HON includes multiple part 63 subparts, including 40 CFR part 63, subparts F, G, and H. 40 CFR 63.101 refers to the definitions section of 40 CFR part 63, subpart F.

from valves in G/V or LL service, pumps in LL service, and connectors in G/V or LL service (see section IV.B.3.b of this preamble) for components on pressure vessels.

3. What key comments did we receive on the proposal revisions pursuant to CAA section 112(d)(5) for organic HAP, and what are our responses?

This section provides summaries of and responses to the key comments received regarding (1) the EPA's authority to establish requirements for certain emissions sources pursuant to CAA section 112(d)(5) and (2) the Agency's proposed new monitoring requirements for pressure vessels in organic HAP service. The EPA did not receive many substantive comments on the other amendments discussed in this section IV.A of this preamble. The document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contains the comments and the EPA's specific responses to these issues.

a. CAA Authority

Comment: Commenters claimed that the EPA failed to appropriately recognize the fundamental differences between area and major sources as distinct sets of sources with different characteristics, including area sources' unique challenges and constraints, such as facility personnel, time demands, and available resources. The commenters stated that area sources often face these and other pressures in ways that are different but no less serious than their major source counterparts. A commenter provided an example, saying that the smaller universe of facility employees at area sources often means that staff spend more time evaluating, understanding, and planning for new regulatory requirements and the associated compliance needs. As such, the commenter expressed that staff commitments may lead to unplanned disruptions in routine operations elsewhere, which can further strain smaller sources that are already more resource-constrained than other entities.

The commenter stated that CAA section 112(d)(5) allows GACT requirements to accommodate these challenges and is intentionally more streamlined and cost-conscious than other CAA regulatory schemes. However, the commenter asserted that the EPA purposefully erased the distinction in favor of imposing costly new regulatory burdens on smaller entities that would not yield

commensurate environmental benefit. The commenter stated that the EPA based the proposed standards on MACT standards, which, they argued, were never intended to apply to area sources. The commenter opined that MACT-level requirements such as quarterly instrument monitoring programs would require a dedicated LDAR contractor and data management system (resulting in several thousand dollars per year of new and potentially unnecessary costs to small facilities) while audio, visual, and olfactory programs (GACT level requirements) are effectively implemented with minimal facility resources.

Response: The EPA acknowledges that some area sources may face distinct challenges from some major sources but disagrees with the commenter that the Agency failed to adequately identify and account for the differences between major and area sources. The EPA establishes MACT standards pursuant to CAA sections 112(d)(2) and (3) using data from the best performing sources. The EPA does not consider cost or burden when establishing the minimum level of stringency required by CAA section 112(d)(3) for initial MACT standards for a source category; rather, the EPA does so when determining whether requiring reductions beyond the minimum level of stringency is appropriate pursuant to CAA section 112(d)(2). Where it is not feasible to prescribe or enforce an emission standard, the EPA may promulgate work practice standards pursuant to CAA section 112(h).

In lieu of MACT standards, the EPA may establish GACT standards for area sources pursuant to CAA section 112(d)(5). GACT includes commercially available methods, practices, and techniques that are appropriate for application considering economic impacts and the technical capabilities of the affected sources.²⁸ As such, consistent with the EPA's obligations under CAA section 112(d)(5) and the Agency's obligation to complete a technology review pursuant to CAA section 112(d)(6), the EPA reviewed similar NESHAP, assessed existing technologies and practices, and considered other relevant information to identify potential control options to consider when proposing and finalizing revisions to the CMAS NESHAP. Commenters did not present adequate evidence to challenge the EPA's position that many CMAS CMPUs subject to GACT standards resemble process units regulated under MACT standards in the HON, the

Miscellaneous Organic Chemical Manufacturing NESHAP (MON), and the Polyether Polyols (PEPO) Production NESHAP. In addition, the EPA is aware that many of the affected CMAS CMPUs are synthetic area sources that have taken emissions limitations or installed federally enforceable control devices to remain below the major source emissions threshold of emitting fewer than 10 tpy of a single HAP and fewer than 25 tpy of any combination of HAP. If not for the emissions limits or control devices, these affected CMAS likely would be major sources of HAP and thus subject to major source NESHAP. Thus, the EPA maintains that CMAS CMPUs operate similarly to CMPUs subject to major source chemical sector rules such as the HON, MON, and PEPO NESHAP.

Also, the EPA considered costs for all of the proposed standards and found that the costs were comparable or less than those the Agency deemed reasonable for organic HAP standards for other chemical sector rulemakings such as the MON, Ethylene Production NESHAP, and PEPO Production NESHAP. Additionally, the EPA compared the cost of complying with the final rule to the annual revenue of an affected entity and found that the cost-to-sales ratio was approximately 0.06 percent (see the document entitled *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources* in the docket for this rulemaking). The EPA notes that while the commenters are correct that area sources may have fewer resources than major sources, operations at area sources are often smaller and less complex (e.g., there are fewer components in organic HAP service to monitor) than those at major sources, and so owners and operators will need comparatively fewer resources to comply with new regulatory requirements.

Further, where the EPA finds it reasonable to establish or revise standards, the level of stringency of a GACT standard may equal the level of stringency of a MACT standard. For example, the GACT standards in 40 CFR part 63, subpart DDDDDD, which is the polyvinyl chlorides and copolymers area source NESHAP, require sources to meet the major source MACT requirements of 40 CFR part 63, subpart HHHHHHH for polyvinyl chlorides and copolymers for equipment leaks. Further, the EPA notes that the GACT standards for process vent emissions for the area source PVC manufacturers are more stringent than the process vent emission limits for major source PVC

²⁸ Sen. Rep. No. 101-228 (1989).

manufacturers. The proposal preamble as well as the EPA's technical analyses (those referenced in sections IV.A through IV.C of the proposal preamble, and the document entitled *Updated Impact Calculations for the CMAS Categories—Final*, which is in the docket for this rulemaking) outline the basis for the Agency's conclusions that the final standards are both reasonable and cost-effective for area sources regulated under the CMAS NESHAP.

Comment: Commenters asserted that the EPA violated the CAA by only setting standards for area sources that use, generate, or produce one of 15 of the 30 urban HAP to produce a material or family of materials described by NAICS code 325. These commenters argued that the EPA must finalize standards for all area sources within the listed CMAS categories.

A commenter stated that when the EPA listed the nine CMAS categories, the Agency did not limit those listings to sources within those categories that use, generate, or produce one of 15 of the 30 urban HAP, and none of the listing documents limit the CMAS categories to any specific HAP. Additionally, the commenter pointed out that the EPA explained as part of the 2009 CMAS rulemaking that while the Agency limited the final standards to the emissions points that emit one of the 15 urban HAP and were sufficient to satisfy the requirements of CAA sections 112(c)(3) and (k)(3)(B), the EPA was not "prohibit[ed] . . . from regulating other [hazardous air pollutants] emitted from area sources."

The commenter continued that the EPA is not prohibited from setting standards for all CMAS but is required to set standards that apply to all sources in the listed source categories. Referencing CAA section 112(c)(1), the commenter claimed that it refers to all HAP, not just the 30 urban HAP. As such, the commenter argued that the EPA can no more set standards for only a subset of area sources than it could for major sources. In addition, the commenter noted that the EPA listed some area source categories alongside categories that are not limited to sources that use, generate, or produce specific urban HAP and provided the example of area source hazardous waste combustors.

To that point, the commenter expressed that the EPA's prior failure to regulate all area sources within the listed CMAS categories resulted in facilities operating unregulated by NESHAP standards. They said that there are many facilities emitting known and unknown HAP that are unlawfully evading regulation and that these

facilities are particularly dangerous when considered in the aggregate and combined with major sources. The commenter said that of the 1,300 potentially unregulated area sources within the listed CMAS categories that the EPA identified as part of the 2009 rulemaking, 127 are in Texas and approximately half of those facilities are concentrated in the Greater Houston area. They asserted that areas with concentrations of unregulated area source chemical manufacturers often overlap with cancer risk and other health risk hotspots.

Also, the commenter added that it is critical that the EPA set standards for all area sources within the listed CMAS categories now because major sources may attempt to reclassify as area sources (or subdivide and reclassify as area sources) to evade HAP regulations.

Finally, the commenter identified several facilities that the existing standards do not cover. The commenter noted that these sources emit approximately 75 tons per year (tpy) of methanol, 55 tpy of styrene, 35 tpy of ethylene glycol, 20 tpy of hydrogen chloride, 15 tpy of formaldehyde, and many tons of other HAP. The commenter stated that based on their review of area sources identified by the EPA's Integrated Compliance Information System for Air database, when compared to CMAS facilities regulated by the CMAS NESHAP, unregulated area source chemical manufacturers reported nearly all the emissions of certain HAP including ethylene glycol, formaldehyde, xylene, HCl, styrene, and methanol.

The commenter referenced the 2020 National Emissions Inventory and said that it included more than 700 facilities within the relevant NAICS codes that have emissions less than 10 tpy of one HAP and less than 25 tpy of all HAP. They said that of these facilities, more than 250 do not report emissions of the 15 HAP covered by the existing CMAS standards but still report approximately 481 tpy of HAP emissions. The commenter also provided several example facilities emitting HAP that do not appear to be currently subject to any NESHAP.

The commenter recommended that the EPA conduct a comprehensive analysis to identify all unregulated area source chemical manufacturers, assess whether the unregulated area sources present a threat of adverse effects to human health or the environment, and set strong standards that leave no area sources unregulated.

Response: The EPA disagrees with the commenter that the Agency has not fulfilled our CAA obligations to the

CMAS categories pursuant to CAA sections 112(c)(1) and 112(k)(3)(B), which set forth the requirements for the Urban Air Toxics program. CAA section 112(c)(1) states that the Administrator shall "list categories and subcategories of major sources and area sources (listed under [CAA section 112(c)(3)])" of the HAP listed pursuant to CAA section 112(b). CAA section 112(c)(3) states that the Administrator shall list sufficient categories or subcategories of area sources such that "90 percent of the area source emissions of the 30 hazardous air pollutants that present the greatest threat to public health" are subject to regulation under CAA section 112.

As the commenter identifies, the EPA listed the nine CMAS categories and set standards for CMPUs emitting at least one of 15 urban HAP (see table 1 to the CMAS NESHAP) and producing a material or family of materials described by NAICS code 325 in the CMAS NESHAP to meet these obligations, as well as those of CAA section 112(k)(3)(B). While the commenter is correct that the EPA is not prohibited from establishing standards for other HAP emitted by CMAS, the CAA does not require the EPA to do so. In addition, the EPA notes that the Agency did not propose to expand the applicability of the CMAS NESHAP to include all CMAS within the nine affected source categories. It would not be appropriate for the EPA to finalize an applicability change that could potentially subject hundreds or thousands of facilities to the CMAS NESHAP for the first time without presenting the regulated community an opportunity to comment. The purpose of this action is to fulfill the EPA's statutory review obligations to conduct a technology review pursuant to CAA section 112(d)(6), and this final rule satisfies those mandatory review obligations.

b. Pressure Vessels

Comment: A commenter opposed the proposed requirement to operate a pressure vessel as a closed system that vents through a closed vent system to a control device. The commenter stated that pressure vessels are designed to not vent during filling and argued that the proposed requirements are not necessary, are not cost-effective, would not reduce emissions, and do not represent GACT. As an example, the commenter said that one facility would need to install a flare at an estimated cost of \$3,000,000 to control emissions from their pressure vessels even though the facility has not reported any emissions or releases from the affected pressure vessels in the past five years.

The commenter continued that the existing Occupation Safety and Health Administration (OSHA) Process Safety Management requirements that determine the layers of protection needed for accidental releases already adequately control such releases.

Response: The EPA disagrees with the commenter that the requirement to operate a pressure vessel as a closed system that vents through a closed vent system to a control device does not represent GACT. As the commenter states, pressure vessels are designed not to vent during filling so releases from a PRD during filling would reflect irregular operation, and the EPA maintains that these emissions should be controlled given the potential for high volume releases. Additionally, prior to this final action, the definition of storage tank in 40 CFR 63.11502(b) only exempted pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. As such, the EPA expects that most pressure vessels affected by the addition of the standards at 40 CFR 63.11497(e) and table 5 to the CMAS NESHAP already should have in place preventative measures as well as capture and containment systems capable of preventing emissions from a pressure vessel's PRD(s) releasing to atmosphere. In situations where a facility must vent a pressure vessel to a control device, the EPA anticipates that most facilities will rely on existing APCDs rather than purchasing and installing a new APCD, as the EPA expects emissions from pressure vessels to be irregular and infrequent, as identified by the commenter's example. For additional details on the EPA's expected emissions reductions and cost estimates, see the document entitled *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Pressure Vessels Associated with Processes Subject to the CMAS NESHAP*, in the docket for this rulemaking.²⁹ In addition, refer to the document entitled *Updated Impact Calculations for the CMAS Categories—Final*, also in the docket for this rulemaking.

While the requirements of other regulations are outside the scope of this action, the EPA emphasizes that OSHA's Process Safety Management provisions do not categorically limit the applicability of or need for NESHAP requirements.

Comment: A commenter pointed out that some pressure vessels that store regulated chemicals are inside containment areas or partially buried

such that monitoring the vessel's surface per EPA Method 21 is not possible. The commenter added that some of these vessels are double-walled tanks designed with an additional external shell outside of the pressure vessel shell (*i.e.*, a tank within a shell). As such, the commenter recommended that the EPA require monitoring only for those points on the pressure vessel that are readily accessible and not unsafe-to-monitor.

Response: The EPA proposed to include provisions for exempting equipment that are unsafe or difficult/inaccessible to monitor from the proposed pressure vessel requirements by referencing 40 CFR 63.168(h) and (i) (for valves in G/V and LL service) and 40 CFR 63.174(f) and (h) (for connectors in G/V and LL service). However, because the requirements are the same, for clarity the EPA is revising the final rule to specify that equipment meeting the criteria specified in 40 CFR 63.11495(a)(6)(ii)(A) and (C) (for valves in LL or G/V service) and 40 CFR 63.11495(a)(6)(ii)(A) and (E) (for connectors in LL or G/V service) are exempt from the monitoring requirements for pressure vessels.

4. What is the rationale for our final approach and decisions for the revisions pursuant to CAA section 112(d)(5) for organic HAP?

The EPA evaluated all comments on the Agency's proposed amendments to include standards for pressure vessels, PRDs, and closed vent systems containing bypass lines. The rule did not previously regulate these emissions sources, and the EPA considered whether control of these sources would be cost effective and feasible for CMAS. Based on the analyses discussed in section IV.B of the proposal preamble, the document entitled *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Pressure Vessels Associated with Processes Subject to the CMAS NESHAP*, the document entitled *Clean Air Act Section 112(d)(5) GACT Standards Analysis for Pressure Relief Devices Associated with Processes Subject to the CMAS NESHAP*, and the document entitled *Updated Impact Calculations for the CMAS Categories—Final*, all of which are in the docket for this rulemaking, as well as the prevalence of similar standards in multiple other chemical sector rulemakings, the EPA finds the requirements reasonable and cost-effective for CMAS to implement.^{30 31}

³⁰ Docket ID No. EPA-HQ-OAR-2024-0303-0032.

³¹ Docket ID No. EPA-HQ-OAR-2024-0303-0035.

While the EPA received several comments on the proposed standards, the commenters did not present any information that led us to change our proposed determinations, and the Agency is finalizing the standards as proposed. However, the EPA is changing the pressure vessel standards to clarify, based on comment, that the unsafe and difficult/inaccessible monitoring provisions apply to equipment on pressure vessels. Section IV.A.3 of this preamble and in the document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contain the relevant comments and the EPA's specific responses and rationale for the Agency's final decisions.

B. Technology Review for the CMAS Categories

1. What did we propose pursuant to CAA section 112(d)(6) for the CMAS categories?

Based on the EPA's technology review for the CMAS categories, the Agency proposed under CAA section 112(d)(6) changes to the CMAS NESHAP for heat exchange systems, process vents, and equipment leaks. The EPA proposed no change under CAA section 112(d)(6) for storage tanks, transfer operations, and wastewater streams. Additionally, with respect to fence line monitoring, the EPA proposed that none of the 15 urban HAP regulated on table 1 to the CMAS NESHAP either had established fence line monitoring methods or were sufficiently prevalent across the nine CMAS categories to serve as reasonable surrogates for fugitive emissions. Also, with respect to flaring for compliance with the process vent standards, the EPA proposed that it was not cost effective to update CMAS flares with the suite of monitoring and operational requirements in 40 CFR 63.670 and 40 CFR 63.671. The EPA provides a summary of the Agency's findings, as proposed, in this section of the preamble.

a. Heat Exchange Systems

In the EPA's technology review for the CMAS categories, the Agency identified one development in practices and processes for CMAS heat exchange systems: the use of the Modified El Paso Method for monitoring for leaks from heat exchange systems. The EPA determined that this method is more effective at identifying leaks and measures a larger number of compounds than the methods previously required in

²⁹ Docket ID No. EPA-HQ-OAR-2024-0303-0035.

the CMAS NESHAP. After evaluating State and Federal regulations requiring the Modified El Paso Method, as well as emissions data collected for the Refinery Sector risk and technology review (RTR) (see section II.D of the proposal preamble and the Refinery Sector RTR rulemaking docket), pursuant to CAA section 112(d)(6) the EPA proposed to require the use of the Modified El Paso Method at 40 CFR 63.11499(d) and item 1.c of table 8 to the CMAS NESHAP—by reference to the HON (40 CFR 63.104(a) and (f) through (l))—for both new and existing heat exchange systems with flow rates greater than or equal to 8,000 gpm.³² The EPA proposed a leak definition of 6.2 ppmv of total strippable hydrocarbon concentration (as methane) in the stripping gas to further reduce HAP emissions from these heat exchange systems and proposed to disallow delay of repair of leaks if the measured concentration meets or exceeds 62 ppmv. Based on an evaluation of incremental HAP cost effectiveness to increase the leak monitoring frequency, the EPA proposed no changes to the monitoring frequency previously required by the CMAS NESHAP for heat exchange systems (*i.e.*, monthly monitoring for the first six months following startup of a source and quarterly monitoring thereafter). The EPA also proposed to require re-monitoring at the monitoring location where owners and operators identified a leak to ensure that they fixed any leaks found. Further, the EPA proposed that none of these proposed requirements for heat exchange systems apply to heat exchange systems that have a maximum cooling water flow rate of 10 gallons per minute or less. Additionally, the EPA proposed that owners and operators may use the current leak monitoring requirements for heat exchange systems at 40 CFR 63.104(b) in lieu of using the Modified El Paso Method, provided that 99 percent by weight or more of the organic compounds that could leak into the heat exchange system are water soluble and have a Henry's Law Constant less than 5.0E-6 atmospheres-cubic meters per mole at 25 degrees Celsius. Finally, the EPA proposed that owners and operators may not inject or dispose of water in a heat exchange system if the water is wastewater as defined in 40 CFR 63.11502. Refer to section IV.C.2 of the proposal preamble for a summary of the EPA's rationale for selecting the proposed leak method, leak definition, and limitation on delay of repairs, as well as the Agency's rationale for retaining the previous monitoring

schedule. For a detailed discussion of the EPA's findings, see the document entitled *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Heat Exchange Systems that Emit Ethylene Oxide and Section 112(d)(6) Technology Review for Heat Exchange Systems Associated with Chemical Manufacturing Process Units at Area Sources Subject to the CMAS NESHAP*.³³

b. Process Vents

As part of the EPA's technology review for the CMAS categories, the Agency investigated the basis for the concentration threshold of "at least 50 ppmv metal HAP" included in the definition of "metal HAP process vent." The EPA added this threshold to the definition in 40 CFR 63.11502(b) as part of the 2012 reconsideration of the NESHAP in response to commenters arguing that it was necessary to better represent GACT as their sulfuric acid regeneration units already achieved over 95 percent reduction in metal HAP.³⁴ However, the Agency did not at that time conduct any analysis to justify the change. As such, the EPA proposed pursuant to CAA section 112(d)(6) to remove the 50 ppmv concentration threshold from the definition of "metal HAP process vent" to ensure that process vents emitting metal HAP were subject to control. See section IV.C.3 of the proposal preamble for a summary of the EPA's rationale for proposing to remove the concentration threshold from the definition of "metal HAP process vent."

c. Equipment Leaks

In the EPA's technology review for the CMAS categories, the Agency identified three control options for further reducing emissions from equipment leaks at CMAS facilities. See section IV.C.1 of the proposal preamble for a summary of the three options. Based on the EPA's evaluation of the feasibility, costs, and emission reductions of each option, the Agency proposed pursuant to CAA section 112(d)(6) to revise the CMAS NESHAP at 40 CFR 63.11495(a)(6) such that owners and operators of new and existing affected sources with equipment in organic HAP service must conduct annual leak detection monitoring of all pumps in LL service, valves in G/V service and LL service, and connectors in G/V service and LL service by following EPA Method 21, with certain exceptions (*e.g.*, pumps, valves, and connectors that

are unsafe to monitor). The EPA also proposed at 40 CFR 63.11495(a)(6) that owners and operators must consider a leak from any of these types of equipment "detected" if the instrument reading equals or exceeds 10,000 ppmv and that owners and operators must make a first repair attempt no later than five calendar days after a leak is detected. Also, the EPA proposed that owners and operators must repair equipment as soon as practicable but no later than 15 calendar days after the leak is detected, except as allowed in 40 CFR part 63, subpart H for delay of repair at 40 CFR 63.171. Additionally, the EPA proposed the incorporation at 40 CFR 63.11495(a)(6) of the HON LDAR requirements for compressors, sampling connection systems, open-ended valves or lines, equipment in HL service, closed vent systems and control devices, and agitators in G/V or LL service.³⁵ For a detailed discussion of the EPA's findings, see the document entitled *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Equipment Leaks that Emit Ethylene Oxide and Section 112(d)(6) Technology Review for Equipment Leaks from Chemical Manufacturing Process Units at Area Sources Subject to the CMAS NESHAP*.³⁶

2. How did the technology review change for the CMAS categories?

Apart from a minor reference adjustment to the proposed requirements for heat exchange systems in organic HAP service, the EPA is finalizing the results of the technology review pursuant to CAA section 112(d)(6) for the CMAS categories as proposed without changes. The EPA is revising 40 CFR 63.11499(d) and item 1.c of table 8 to the CMAS NESHAP to remove the reference to 40 CFR 63.104(k) and instead revising 40 CFR 63.11499(d)(6) to provide similar language prohibiting owners and operators from injecting or disposing of wastewater via any heat exchange system in an affected CMU.

3. What key comments did we receive on the technology review, and what are our responses?

This section provides summaries of and responses to the key comments received regarding the portions of the

³⁵ The HON LDAR requirements for compressors, sampling connection systems, open-ended valves or lines, equipment in HL service, closed vent systems and control devices, and agitators in G/V or LL service appear respectively at 40 CFR 63.164, 40 CFR 63.166, 40 CFR 63.167, 40 CFR 63.169, 40 CFR 63.172, and 40 CFR 63.173.

³⁶ Docket ID No. EPA-HQ-OAR-2024-0303-0027.

³³ Docket ID No. EPA-HQ-OAR-2024-0303-0031.

³⁴ 77 FR 75740 (Dec. 21, 2012).

³² Docket ID No. EPA-HQ-OAR-2010-0682.

EPA's technology review for the CMAS categories related to heat exchange systems, equipment leaks, and flares. The EPA did not receive many substantive comments on the other amendments discussed in this section IV.C of this preamble. Based on the comments the EPA received on the proposed technology review provisions, the Agency is finalizing, as proposed, to require monitoring via the Modified El Paso Method for heat exchange systems with one minor change. The EPA also is finalizing, as proposed, an annual instrument monitoring program for equipment leaks and the Agency's decision not to apply the suite of operational and monitoring requirements outlined in 40 CFR 63.670 and 40 CFR 63.671 to flares in organic HAP service at CMAS facilities.

While the EPA received comments on the Agency's determination that there were no cost-effective developments for storage tanks and wastewater, commenters did not provide any additional information that suggested our analyses were incorrect. Therefore, the EPA is not finalizing any changes to the requirements in the CMAS NESHAP for storage tanks and wastewater at this time. The document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contains the comment summaries and the EPA's responses to these issues as well as to additional issues raised regarding the Agency's technology review's proposed requirements for the CMAS categories. Notably, the EPA did not receive any comments on the Agency's proposal arguing that there are no developments in practices, processes, and control technologies that warrant revisions to the GACT standards for transfer operations.

a. Heat Exchange Systems

Comment: Some commenters objected to the EPA's proposal to replace the existing delay of repair options in 40 CFR 63.104(e) (as referenced in table 8 to the CMAS NESHAP) with those in 40 CFR 63.104(j), which only allow delay of repair for heat exchange systems in organic HAP service if the leak is below an action level of 62 ppmv (as methane) in the stripping gas. The commenters argued that the proposed option will likely lead to facilities with smaller recirculation rates emitting more HAP because they may be required to isolate equipment or to shut down process equipment as opposed to calculating the emissions from a continued leak and delaying repair if they are less than the

emissions from a shutdown event. In addition, the commenters argued that the proposed provisions impose a requirement to fix leaks in scenarios that will result in unnecessary emissions and unwarranted safety risks. The commenters requested that the EPA not finalize the proposed delay of repair requirements and instead keep the existing requirements as they provide flexibility for facilities while minimizing environmental impact and safety risks.

Response: The EPA disagrees with the commenters' request to not finalize the incorporation of the delay of repair provisions at 40 CFR 63.104(j) via 40 CFR 63.11499(d) and item 1.c. of table 8 to the CMAS NESHAP. First, the commenters appear to have misunderstood the EPA's proposal to replace the existing delay of repair options in 40 CFR 63.104(e) (as referenced in table 8 to the CMAS NESHAP) with those in 40 CFR 63.104(j). In contrast to the commenters' interpretation, the EPA's proposed rule text at 40 CFR 63.104(j), which the Agency is finalizing, does allow delay of repair until the next scheduled shutdown of the heat exchange system, if the repair is technically infeasible without a shutdown and the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair.³⁷ Second, the final CMAS NESHAP only requires monitoring via the Modified El Paso Method for heat exchange systems with flow rates greater than or equal to 8,000 gpm, and as previously mentioned, the final requirements allow owners and operators of these heat exchange systems to delay repair until the next scheduled shutdown under certain circumstances. Moreover, heat exchange systems with flow rates less than 8,000 gpm are subject to 40 CFR 63.11495(b), which requires owners and operators to develop and operate in accordance with a heat exchange system inspection plan that describes the inspections owners and operators must perform at least once per quarter.³⁸ As

³⁷ The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv or, for heat exchange systems with a recirculation rate of 10,000 gallons per minute or less, the delay of repair action level is a total hydrocarbon mass emissions rate (as methane) of 1.8 kg/hr.

³⁸ Inspections as required by 40 CFR 63.11495(b) must provide evidence of hydrocarbons in the cooling water and may include checks for visible floating hydrocarbon on the water, hydrocarbon odor, discolored water, and/or chemical addition rates. Owners and operators of these heat exchange systems must also perform repairs to eliminate the

such, the EPA expects that the final requirements already minimize the burden to facilities with heat exchange systems with smaller recirculation rates as they will not be subject to monitoring via the Modified El Paso Method nor the associated repair requirements.

Even considering the minimum flow rate of 8,000 gpm, the EPA believes it is important to address sufficiently large leaks (that are at least an order of magnitude larger than the leak definition) quickly given the potential for large amounts of emissions and a facility's general duty to minimize emissions. Notably, the EPA determined that large leaks are also significantly more cost-effective to fix than small leaks and that the final requirements for heat exchange systems in organic HAP service with flow rates greater than or equal to 8,000 gpm are cost-effective and reasonable when considering a distribution of potential leaks, not just those an order of magnitude larger than the leak definition. For additional details on the expected emissions reductions and costs estimated by the EPA, see the document entitled *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Heat Exchange Systems that Emit Ethylene Oxide and Section 112(d)(6) Technology Review for Heat Exchange Systems Associated with Chemical Manufacturing Process Units at Area Sources Subject to the CMAS NESHAP*, which is in the docket for this rulemaking.³⁹ In addition, see the document entitled *Updated Impact Calculations for the CMAS Categories—Final*, also in the docket for this rulemaking.

Comment: Commenters requested that the EPA amend the inclusion of the language at 40 CFR 63.104 to clarify that the rule will not require owners and operators to monitor regulated heat exchange systems using water sampling methods or a surrogate indicator pursuant to 40 CFR 63.104(b) or (c) if the heat exchange system is monitored for leaks according to 40 CFR 63.104(g) (i.e., via the Modified El Paso Method). The commenters pointed out that the current language does not allow sources to stop monitoring using the methods in 40 CFR 63.104(b) or (c) once they have begun using the Modified El Paso method. In addition, the commenters noted that neither 40 CFR 63.104 nor the referencing language in table 8 to the CMAS NESHAP provide a means of ceasing compliance with 40 CFR

leak within 45 calendar days after indications of the leak are identified but may delay the repair if a reason is documented in the next semiannual compliance report.

³⁹ Docket ID No. EPA-HQ-OAR-2024-0303-0031.

63.104(d) once a facility begins complying with 40 CFR 63.104(h) through (j).

Response: The EPA agrees with commenters that the final rule should allow sources to stop monitoring using methods in 40 CFR 63.104(b) or (c) once they have begun monitoring using the Modified El Paso method. However, the EPA disagrees with the commenter that the proposed 40 CFR 63.11499(d) did not permit sources to discontinue using water sampling methods or a surrogate indicator once they begin monitoring via the Modified El Paso method. The EPA also disagrees that the proposed provisions did not offer a mechanism to end compliance with the repair requirements at 40 CFR 63.104(d) after a facility begins complying with the repair requirements at 40 CFR 63.104(h) through (j). Under the final rule at 40 CFR 63.11499(a), owners and operators must follow the requirements outlined in table 8 to the CMAS NESHAP, unless certain exceptions apply. According to item 1.c of table 8 to the CMAS NESHAP, once the compliance dates have passed, the provisions in items 1.a and 1.b (*i.e.*, referring to the current monitoring and repair requirements in 40 CFR 63.104(b) through (e)) will no longer apply. Instead, owners and operators then must comply with the requirements in 40 CFR 63.104(f) through (j) and (l). Therefore, no revisions to the requirements are necessary in response to the commenter's request. The EPA is finalizing the proposed rule text without changes, except that in the final rule, the EPA is removing the reference to 40 CFR 63.104(k) and rephrasing 40 CFR 63.11499(d)(7) such that after the compliance dates specified in the final 40 CFR 63.11494(i), owners and operators may not inject water into or dispose of water in a heat exchange system if the water is considered wastewater as defined in 40 CFR 63.11502(b).

b. Equipment Leaks

Comment: A commenter generally supported the EPA's proposed CAA section 112(d)(6) practices for reducing equipment leaks from equipment in organic HAP service (*i.e.*, annual instrument monitoring of connectors in G/V and LL service, valves in G/V and LL service, and pumps in LL service via EPA Method 21 with a leak definition of 10,000 ppmv and following the requirements of 40 CFR part 63, subpart H for compressors, sampling connection systems, open-ended valves or lines, and agitators). However, another commenter contended that the proposed instrument monitoring program was

inadequate because the EPA failed to consider certain developments including fenceline monitoring, low-leak and leakless equipment, area monitoring, and "enhanced LDAR" programs. The commenter argued that although the EPA considered optical gas imaging (OGI) and leak detection and sensor networks (LDSNs) as developments, the basis for the EPA's rejection was insufficient. The commenter suggested that the EPA could require OGI in conjunction with the existing leak detection practices and processes directed at lower-level leaks given the EPA has previously stated that OGI is less effective at finding smaller leaks. In response to the EPA's statements that OGI cannot observe all chemical compounds, the commenter asserted that OGI does not need to observe all chemicals emitted by CMAS to be an effective tool in identifying leaks.

With respect to LDSNs, the commenter suggested that the EPA has sufficient information to require the practice given what the commenter characterizes as the EPA's collaborative role in developing and testing the technology. The commenter said that the EPA could develop LDSNs for CMAS and pointed out that the EPA has recently approved the use of an LDSN as an Alternative Means of Emission Limitation (AMEL) at the Flint Hills Resources West Refinery in Corpus Christi, Texas.

The commenter also referenced comments on the 2023 HON and 2024 PEPO Production NESHAP RTR proposals and stated that they contain additional information on low-leak and leakless equipment, area monitoring, including components of "enhanced LDAR programs," OGI, and LDSN.

Response: The EPA acknowledges the commenters' support for and opposition to the proposed instrument monitoring program for equipment in organic HAP service. However, the EPA disagrees with the commenter that the Agency failed to account for developments in equipment leak controls pursuant to CAA section 112(d)(6). The EPA assessed feasible options for additional control measures and incorporated those into the proposed rule where they demonstrated cost-effective emissions reductions and could be reasonably implemented.

With respect to OGI, as stated in the technical analysis, the EPA maintains that CMAS emit a wide variety of chemicals and that OGI cannot observe all of them.⁴⁰ While the EPA agrees with

the commenter that OGI does not necessarily have to observe all chemicals to identify a leak, the CMAS NESHAP covers a wide variety of sources using hundreds of different chemicals. OGI cameras can detect only compounds that have a peak in the spectral range of the filter on the OGI camera (generally around 3.2 to 3.4 micron for cameras used to detect hydrocarbons). While some of the compounds of interest do have a peak in this range, several of the organic compounds listed in table 1 to the CMAS NESHAP have very weak peaks or no peaks in the spectral range common to OGI camera filters, making it extremely difficult for an OGI camera to see these compounds. For example, chloroform's response in this spectral range makes it almost impossible to detect with an OGI camera. For those compounds that an OGI camera can observe, the detection range of the camera varies, and some compounds must be present in high quantities before being detectable. As such, the EPA maintains that the proposed (and finalized) instrument monitoring program for equipment in organic HAP service is most appropriate for detecting equipment leaks from CMAS CMPUs at this time.

With respect to LDSNs, as stated in the technical analysis document, the EPA does not have the information necessary to develop appropriate monitoring requirements that could be incorporated into the final rule.⁴¹ The CMAS NESHAP covers a wide variety of operations that involve numerous different HAP, and while the EPA did participate in developing and testing LDSNs, the EPA recognizes that consent decrees and AMELs are often specific to a facility and not necessarily applicable to the wider source category (or source categories in the case of the CMAS NESHAP). Additionally, some AMELs, like the one mentioned by the commenter, are in use for the first time and need further study before the EPA can apply the AMEL's approach more broadly.

With respect to the additional information provided by the commenter via their comments on the 2023 HON and 2024 PEPO Production NESHAP RTR proposals (which the commenter submitted to the docket for this action), the EPA notes that the final instrument monitoring program for this action is less stringent than the instrument monitoring programs in the HON and the PEPO Production NESHAP. It would not be necessary to use low-leak and

⁴⁰ Docket ID No. EPA-HQ-OAR-2024-0303-0027.

⁴¹ Docket ID No. EPA-HQ-OAR-2024-0303-0027.

leakless equipment to achieve compliance with the final CMAS management practices, and low-leak and leakless equipment are typically more expensive than standard components. As such, the EPA did not evaluate a requirement for low-leak or leakless equipment, as standard equipment should be sufficient to meet the proposed, and final, provisions.

With respect to area monitoring, the CMAS NESHAP regulates a wide variety of operations and sources, and the emissions are variable, both in expected compounds and magnitude. Based on that variability, the EPA does not have sufficient data (e.g., designation of monitored compounds for different source categories and different operations, appropriate action levels, and spacing of monitors) to establish an area monitoring program for the wide variety of operations affected by the CMAS NESHAP.

Also, as the commenter noted, “enhanced LDAR programs” contain many of the requirements that the EPA proposed and is finalizing in this action. The EPA explained earlier in this response why the Agency chose not to include other elements, such as leakless and low-emission equipment. Owners and operators may need to add other elements of “enhanced LDAR programs” to improve an existing LDAR program, but because the CMAS NESHAP did not previously require instrument monitoring for LDAR, the EPA is unable to assess at this time whether additional guidance is necessary.

c. Flares

Comment: Some commenters supported the EPA’s decision not to apply the suite of operational and monitoring requirements outlined in 40 CFR 63.670 and 40 CFR 63.671 to flares in organic HAP service at CMAS facilities. Commenters noted that although the EPA has incorporated the revised flare requirements into several recent rules, the EPA has done so selectively based on the flare characteristics of those industries. Additionally, the commenter noted that while the EPA has determined that the general provisions at 40 CFR 63.11 cannot ensure 98 percent control of organic HAP, the GACT process vent and storage tank standards applicable to CMAS CMPUs do not require 98 percent control, and the costs to apply the revised standards outweigh any incremental emissions reductions.

On the other hand, another commenter argued that the EPA should include the suite of flare operational and monitoring requirements in the

Refinery Sector NESHAP (outlined in 40 CFR 63.670 and 40 CFR 63.671) in the CMAS NESHAP because some process vent or storage tank standards require control efficiencies that are greater than what the flare standards in 40 CFR 63.11 can guarantee. The commenter noted that the EPA assumed a baseline control efficiency for flares operating under the requirements of 40 CFR 63.11 of 85.9 percent and pointed out that the only CMAS standards below the assumed baseline control efficiency are those for existing batch process vents and periods of startup and shutdown for continuous process vents. The commenter referenced the EPA’s proposal, noting that when the EPA promulgated the original CMAS NESHAP in 2009, available data indicated that the provisions in 40 CFR 63.11 would enable flares to achieve 98 percent control of emissions from process vents and storage tanks. The commenter argued that the EPA implied the Agency would not have proposed or finalized flaring as a compliance option in the original rulemaking if the Agency knew that sources could not reliably achieve the assumed 98 percent control level underlying those provisions. The commenter urged the EPA to use the same rationale used in the HON and Group I Polymer and Resins NESHAP (where the flare requirements were updated under CAA section 112(d)(2) and (3)) to update the CMAS standards with the suite of flare operational and monitoring requirements outlined in 40 CFR 63.670 and 40 CFR 63.671.

Response: The EPA acknowledges the commenters’ support for and opposition to the requirement that owners and operators operate CMAS flares pursuant to the requirements outlined in 40 CFR 63.670 and 40 CFR 63.671. The EPA agrees with commenters that none of the process vent or storage tank standards for non-flare control devices require a reduction of organic HAP emissions by at least 98 percent by weight, whether through removal or destruction; those standards only require 85 to 95 percent control by weight. The EPA also concurs with the commenter that flares complying with 40 CFR 63.11 have an assumed control efficiency greater than some of the required non-flare APCD control efficiencies. However, the EPA disagrees with the commenter’s assertion that the Agency implied that if we were aware that flares complying with 40 CFR 63.11 were not achieving 98 percent control efficiency, then we would not have allowed compliance by use of a flare. GACT standards consider relevant factors such as cost and burden to facilities, whereas MACT standards

established under CAA sections 112(d)(2) and (3) do not. The EPA revised the major source flare requirements identified by the commenter pursuant to CAA sections 112(d)(2) and (3) to ensure compliance with the MACT floor that the EPA had established in previous iterations of those rules. However, the CMAS NESHAP does not include MACT standards where the EPA identified potential underperformance requiring updates to those standards, such as changes to the flare requirements in other NESHAP. As such, for the EPA’s review of the existing flare standards and practices, the Agency relied on the technology review authority of CAA section 112(d)(6) and considered the development of the suite of operational and monitoring requirements outlined in 40 CFR 63.670 and 40 CFR 63.671, consistent with our typical approaches. It would be speculative to opine on whether the EPA would have established different standards in the original rulemaking if the EPA were aware of the costs of ensuring flares achieve 98 percent control efficiency. Nonetheless, at this time, the EPA considers the costs and burden of operating CMAS flares pursuant to the flare requirements in 40 CFR part 63, subpart CC (i.e., 40 CFR 63.670 and 40 CFR 63.671) unreasonable and not cost-effective for CMAS. The EPA notes that the commenters did not provide sufficient information for the EPA to consider revising this proposed, and now finalized, determination.

Comment: A commenter argued that CAA section 112(d)(6) does not allow the EPA to dismiss developments and refuse to update standards based on cost. The commenter asserted that the D.C. Circuit has recognized that developments are a core requirement of CAA section 112(d)(6) and that it is unlawful, arbitrary, and capricious for the EPA to propose not to incorporate the flare monitoring and operational requirements at 40 CFR 63.670 and 40 CFR 63.671 into the CMAS NESHAP because it ignores statutory purposes that the Agency is required to consider pursuant to *NRDC*.

Response: The EPA disagrees that the Agency has ignored the statutory purpose of CAA section 112(d)(6) and that we are prohibited from considering costs when determining whether additional controls are “necessary” when conducting a section 112(d)(6) review. The D.C. Circuit has repeatedly held to the contrary.⁴² The purpose of

⁴² See, e.g., *Ass’n of Battery Recyclers*, 716 F.3d at 67; *Nat. Res. Def. Council v. EPA*, 529 F.3d 1077, 1081–82 (D.C. Cir. 2008) (holding that EPA’s

CAA section 112(d)(6) is to periodically review and update emissions standards as necessary. The EPA did not propose any changes to the level of control necessary to comply with the process vent and storage tank standards, nor did the Agency propose that flares are no longer a compliance option for those standards, as established in the original rulemaking. Consistent with the requirements of CAA section 112(d)(6), the EPA reviewed applying the monitoring and operational requirements at 40 CFR 63.670 and 40 CFR 63.671 because those requirements represent a development in the control technology. However, reviews conducted under CAA section 112(d)(6) are not cost-blind. Considering the costs of operating a flare in accordance with 40 CFR 63.670 and 40 CFR 63.671 and other relevant factors, the EPA determined that it was not reasonable or cost-effective to revise the monitoring or operational requirements for CMAS flares in this final action. As such, the EPA is not finalizing any changes to the final rule in response to this comment.

4. What is the rationale for our final approach and decisions for the technology review?

The EPA's technology review focused on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the 2012 reconsideration.⁴³ Specifically, the EPA's technology review focused on the existing GACT standards for the various emissions sources in the CMAS categories, including heat exchange systems, storage tanks, process vents, transfer operations, wastewater, and equipment leaks. In the proposal, the EPA identified cost-effective and feasible developments for CMAS heat exchange systems, process vents, and equipment leaks, and the Agency proposed to revise the standards for these three emissions sources under the technology review. The EPA did not identify cost-effective and feasible developments in practices, processes, or control technologies for transfer operations, storage tanks, and wastewater. The proposed rule and the supporting materials in the docket materials for this rulemaking contain further information regarding the technology review.

During the public comment period, the EPA received several comments on the Agency's proposed determinations for the technology review. The

document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contains the comments and the EPA's specific responses and rationale for the Agency's final decisions. Commenters did not present information that led us to change our proposed developments for CMAS heat exchange systems, process vents, and equipment leaks, and the EPA is finalizing revised standards for these three emissions sources, as proposed under the technology review. Commenters did not present any information that led us to change our proposed determinations under CAA section 112(d)(6) for transfer operations, storage tanks, wastewater, and flares, and the EPA is finalizing the Agency's determination that no changes to these standards are warranted.

C. Other Amendments to the CMAS NESHAP

1. What other amendments did we propose for the CMAS categories?

The EPA proposed provisions at 40 CFR 63.11496(g)(1)(iv), 40 CFR 63.11497(g)(1)(iv), and 40 CFR 63.11501(b) and (d) that require owners or operators to submit electronic copies of certain required NOCS, performance test reports, and periodic reports through the EPA's CDX using CEDRI. The EPA also proposed two narrow circumstances in which owners or operators may seek extensions to the deadline if conditions outside of their control prevent reporting within five business days of the reporting deadline. The EPA proposed that an extension may be warranted due to outages of the EPA's CDX or CEDRI that precludes an owner or operator from accessing the system and submitting required reports. The EPA proposed that an extension also may be warranted due to a *force majeure* event, such as an act of nature, act of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

Also, the EPA proposed at 40 CFR 63.11496(f)(2)(i)(E)(ii) that owners or operators conduct performance testing once every five years to demonstrate compliance with emission limits for certain process vents and storage tanks if a source routes emissions to a non-flare control device. Specifically, the EPA proposed removing the design evaluation option at 40 CFR 63.11496(g)(2) and table 5 of the CMAS NESHAP and the engineering assessment option at 40 CFR 63.11496(f)(3)(ii) and instead requiring

ongoing performance tests at proposed 40 CFR 63.11496(f)(3)(iv), (4), and (5), and 40 CFR 63.11496(g)(1)(iii) for owners and operators using a control device other than a flare to comply with the emission limits and other requirements for batch and continuous process vents and at 40 CFR 63.11497(g)(1)(iii) for owners and operators using a control device other than a flare to comply with the emission limits and other requirements for storage tanks.

In addition, the EPA proposed to eliminate an exemption for certain wastewater streams related to periods of startup and shutdown. More specifically, the EPA proposed to remove the language at 40 CFR 63.11498(b) stating that the requirements of item 2 to table 6 of 40 CFR part 63, subpart VVVVVV for wastewater streams with a partially soluble HAP concentrations greater than 10,000 parts per million by weight (ppmw) and a separate organic phase do not apply during periods of startup or shutdown.

Additionally, in light of *NRDC*, which vacated affirmative defense provisions in the Portland Cement Manufacturing NESHAP, the EPA proposed eliminating the regulatory affirmative defense provisions from the CMAS NESHAP at 40 CFR 63.11501(e) in their entirety and the definition of "affirmative defense" in 40 CFR 63.11502(b).

Finally, the EPA proposed revisions to clarify text or correct typographical errors, grammatical errors, and cross-reference errors. These proposed changes include but are not limited to: referring only to 40 CFR part 63, subpart F when referring to definitions in the HON; identifying the specific version of NAICS codes used to determine rule applicability; removing redundant language; and requiring basic facility details for reporting purposes. Section IV.D.3 of the proposal preamble discusses other proposed editorial corrections and clarifications.

2. How did the other amendments for the CMAS categories change since proposal?

Based on comments received on the proposed rulemaking, the EPA is making a limited number of minor changes to the amendments described in section IV.D.1 of this preamble. With regard to electronic reporting, the EPA is making minor clarifying edits to the spreadsheet reporting templates; the CEDRI website will contain the final versions of these templates. Additionally, the EPA is revising the proposed provisions to allow in the final rule owners and operators to

consideration of costs does not invalidate the Agency's determination under Section 112(d)(6)).

⁴³ 77 FR 75740 (Dec. 21, 2012).

submit the NOCS up to 150 days after the effective date of the rule. Otherwise, the EPA is finalizing the proposed changes to the CMAS NESHAP identified in section III.C of this preamble and IV.D of the proposal preamble without change.

3. What key comments did we receive on the other amendments for the CMAS categories, and what are our responses?

This section provides summaries of and responses to the key comments received regarding the EPA's proposal to eliminate (1) the design evaluation option at 40 CFR 63.11496(g)(2) and table 5 to the CMAS NESHAP and (2) an exemption at 40 CFR 63.11498(b) for certain wastewater streams during periods of startup and shutdown. The EPA did not receive many substantive comments on the other amendments discussed in this section IV.C of this preamble. The comments the EPA received generally supported the Agency's proposal for owners or operators to submit electronic copies of specified performance test reports and periodic reports via the EPA's CDX using CEDRI, as well as our proposal to remove the affirmative defense provisions. The comments the EPA received regarding other amendments generally include issues related to electronic reporting, ongoing performance testing, and revisions that the Agency proposed for addressing technical and editorial corrections. The document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, available in the docket for this rulemaking, contains the comments and the EPA's specific responses to these issues.

a. Performance Testing

Comment: Some commenters opposed the EPA's proposal to remove the design evaluation option at 40 CFR 63.11496(g)(2) and table 5 to the CMAS NESHAP and instead favored retaining that option rather than requiring periodic performance testing to demonstrate compliance with the storage tank or process vent control requirements.

Commenters claimed that area sources face unique challenges to conducting stack testing, including low flow, small duct/vent diameters, and other measurement obstacles. The commenters also remarked that performance testing represents a significant expense for smaller area sources compared to major sources. These commenters noted that it was unclear why the EPA proposed

eliminating the design evaluation option for CMAS, given that in other major source rulemakings the EPA retained similar provisions, such as those for storage vessels with closed vent systems, transfer racks, and wastewater control devices under the HON, as well as those for storage vessels and small control devices under the MON.

Another commenter asserted that periodic performance testing is overly burdensome to facilities that use non-flare control devices for operational or cost reasons and will not result in a commensurate benefit to human health or the environment. The commenter provided that in many instances sampling at the inlet to a control device can create a safety hazard. The commenter requested that, at minimum, the EPA incorporate provisions in the final rule that allow for reduced performance testing frequency based on a history of good performance. Additionally, the commenter asked that the EPA not require repeat performance testing unless there has been a change to the process or to the control device. Conversely, another commenter expressed support for the EPA's proposal to require performance testing of non-flare control devices every five years.

Response: The EPA acknowledges the commenters' support for and opposition to the provisions requiring a performance test of non-flare control devices initially and once every five years subsequently. However, the commenters provided no supporting information for their claim that performance testing represents a significant cost to area sources. The economic analysis conducted for the proposed action identified that the average annual revenue for an affected CMAS entity was approximately \$12,500 million.⁴⁴ Even for small businesses exclusively, the analysis determined that the average annual revenue was \$230 million. As part of the EPA's information collection request (ICR) supporting statement, the Agency estimated that a performance test would cost less than \$50,000.⁴⁵ As such, the EPA does not anticipate that the costs of initial and subsequent performance tests will significantly impact an average or small entity, given that the estimated costs represent approximately 0.02 percent of the total annual costs to a small entity and are incurred only once every five years.⁴⁶

⁴⁴ Docket ID No. EPA-HQ-OAR-2024-0303-0025.

⁴⁵ Docket ID No. EPA-HQ-OAR-2024-0303-0039.

⁴⁶ See the document entitled *Economic Impact Analysis for the Final National Emission Standards*

With respect to unique challenges at area sources, the EPA acknowledges that control devices at CMAS may be smaller than those at major source facilities. While low flow and small duct/vent diameters can present some measurement challenges, the EPA expects facilities will be able to purchase or install equipment, increase throughput, or otherwise address these concerns, as facilities subject to other area source NESHAP that require regular performance testing, such as the gasoline distribution NESHAP, the polyvinyl chloride and copolymers production NESHAP, and the hazardous waste combustors NESHAP, have achieved compliance with similar requirements for many years.⁴⁷ Additionally, the EPA notes that many CMAS subject to the NESHAP are synthetic area sources already subject to title V requirements and as such already conduct performance tests to revise and update their permits on a five-year basis. The EPA notes that owners and operators may apply to use an alternative test method in accordance with the provisions of 40 CFR 63.7(f) for site-specific issues that may make the specified methods difficult to use, such as interferants, unusual flow situations, etc.

In response to the commenters who pointed out that the EPA has retained the design evaluation option in certain major source rulemakings, the EPA emphasizes that verifying compliance with the standards is especially critical for CMAS. The EPA has found that control devices often fall short of the efficiency levels claimed by manufacturers for various reasons. However, the CAA limits area sources to having a potential to emit less than 10 tpy for any single HAP and 25 tpy for any combination of HAP. Therefore, reduced control efficiency can lead to higher-than-expected emissions, potentially causing a facility to exceed the 10/25 tpy thresholds established by regulation. This potential impact is particularly relevant for synthetic area sources, which take enforceable limits on their control device(s) to remain below major source thresholds. The EPA also notes that a single compliant performance test does not guarantee future good performance. Control efficiency can degrade over time, and it is important to reassess the operation of the control device as it ages. Additionally, operators and practices

for Hazardous Air Pollutants: Chemical Manufacturing Area Sources, available in the docket for this rulemaking.

⁴⁷ See 40 CFR part 63 subparts BBBB, DDDDD, and EEE, respectively.

may change over time, and a performance test every five years ensures that APCDs continue to meet the standards.

Comment: A commenter requested that the EPA extend the deadline for submitting a NOCS from the proposed 60 days to 150 days after the final rule's effective date. This NOCS, as proposed, would include a summary of performance test results and/or an engineering assessment related to the proposed removal of the design evaluation option in 40 CFR 63.11496(g)(2) and table 5 to the CMAS NESHAP. The commenter stated that additional time is needed to conduct the performance test and that compiling some of the required submission information would involve significant effort. The commenter also noted that other major source rules, like the HON and PEPO Production NESHAP, provide 150 days after the effective date of the final rule to submit the NOCS report. Therefore, the commenter concluded, the final CMAS rule should also provide the same timeline.

Response: The EPA agrees with the commenter that some sources may need to conduct performance testing which can take time to contract, execute, and obtain results. Additionally, the EPA acknowledges that the number of affected CMAS may strain the availability of resources for conducting the required performance tests. Therefore, the EPA is revising the final rule at 40 CFR 63.11496(f)(3)(ii) and 40 CFR 63.11501(b) to extend the NOCS submission deadline to 150 days following the rule's effective date, although sources may submit prior to the deadline.

b. Wastewater

Comment: A commenter objected to the EPA's proposal to remove the language at 40 CFR 63.11498(b) that exempts certain wastewater streams from the control requirements of item 2 in table 6 to the CMAS NESHAP during periods of startup and shutdown. The commenter stated that maintenance wastewater is typically generated during shutdown of process equipment; therefore, the elimination of the exemption would subject maintenance wastewater to the control requirements of item 2 in table 6 to the CMAS NESHAP. As such, the commenter requested that the EPA incorporate the HON's maintenance wastewater provisions at 40 CFR 63.105 into the CMAS NESHAP. The commenter added that in the original HON rulemaking, the EPA acknowledged that maintenance wastewater was distinctly separate from process wastewater and should be

managed through facility-specific procedures. Additionally, the commenter stated that determining the stream characteristics of maintenance wastewater is often difficult, given that a controlled drain system does not capture all maintenance wastewater.

Response: The EPA considers the existing standards reasonable to address maintenance wastewater generated by CMAS CMPUs and therefore finds no need to incorporate the provisions at 40 CFR 63.105 into the CMAS NESHAP.

40 CFR 63.11498(a) requires that all wastewater streams from a CMPU subject to the CMAS NESHAP comply with item 1 of table 6 to the CMAS NESHAP (*i.e.*, owners and operators must discharge wastewater streams to onsite or offsite wastewater or hazardous waste treatment). According to 40 CFR 63.11498(a)(1), owners and operators of CMAS must understand the applicability of requirements to all wastewater streams, including maintenance wastewater, based on their concentration at all points in time. While the commenter is correct that 40 CFR 63.11498(b) previously stated that the requirements of item 2 of table 6 to the CMAS NESHAP did not apply during periods of startup or shutdown, that provision did not exempt sources from complying with the other aspects of 40 CFR 63.11498 or table 6 to the CMAS NESHAP. Therefore, owners and operators should already know the concentration of most wastewater streams (including maintenance wastewater) from CMAS CMPUs, and those streams should already be captured and sent to treatment, as required by the original rule.⁴⁸

For maintenance wastewater streams that contain partially soluble HAP at a concentration greater than or equal to 10,000 ppmw and separate water and organic phases, the EPA expects that facilities already have capture and control systems in place due to other wastewater restrictions (*e.g.*, National Pollutant Discharge Elimination System permits, local publicly owned treatment works discharge criteria, *etc.*). Given these other applicable and existing wastewater restrictions, the EPA anticipates that owners and operators cannot discharge wastewater streams containing an unseparated water and organic phase or being treated as hazardous waste (per item 2.b. of table 6 to the CMAS NESHAP). Moreover, the EPA does not expect that facilities would change capture and control systems for these wastewater streams during periods of startup or shutdown. Accordingly, the EPA believes the

removal of the exemption to control wastewater for periods of startup and shutdown from the CMAS NESHAP has no impact on CMAS facility operations and still ensures that a CAA section 112 standard is in place at all times.

4. What is the rationale for our final approach and decisions regarding the other amendments for the CMAS categories?

Based on the comments received for these other amendments, the EPA is generally finalizing all proposed requirements. In a few instances, the EPA received comments that led to additional minor editorial corrections and technical clarifications being made in the final rule. Section IV.D.3 of this preamble and the document entitled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, contain the EPA's rationale for these corrections and technical clarifications.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. What are the affected facilities?

The EPA estimates that this final rule will affect 251 facilities subject to the CMAS NESHAP. The document entitled *List of Facilities Subject to the CMAS NESHAP* which is in the docket for this rulemaking, lists these facilities.⁴⁹

B. What are the air quality impacts?

This final action will reduce HAP and volatile organic compound (VOC) emissions from CMAS. The EPA estimates that the final amendments to the NESHAP will reduce overall HAP emissions from CMAS by approximately 160 tpy based on the finalized provisions detailed in sections III.A through C of this preamble. Additionally, the EPA estimates that the final amendments will reduce VOC emissions by 1,582 tpy.

The document entitled *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources* (which is in the docket for this rulemaking), the analyses referenced in sections IV.B through D of the proposal preamble, and the document entitled *Updated Impact Calculations for the CMAS Categories—Final Rule* (which is in the docket for this rulemaking) contain more information about the estimated

⁴⁸ 74 FR 56008 (Oct. 29, 2009).

⁴⁹ Docket ID No. EPA-HQ-OAR-2024-0303-0028.

emissions reductions associated with this final rulemaking.

C. What are the cost impacts?

The EPA estimates the costs of the final requirements detailed in sections III.A through III.C of this preamble will be approximately \$18.4 million in total capital costs (in 2024 dollars for the entire period of analysis) and \$5.7 million in total annual costs (including product recovery). The “total annual costs” are the sum of the annualized capital costs and other annual costs (e.g., operating and maintenance costs, recordkeeping and reporting costs). To obtain annualized capital costs, the EPA multiplies a capital recovery factor by the capital costs. The EPA bases the capital recovery factor on the lifetime of the capital equipment as well as the interest rate.

The documents referenced in sections IV.B through IV.D of the preamble to the proposed rule and in the document entitled *Updated Impact Calculations for the CMAS Categories—Final*, which is in the docket for this rulemaking, contain more information about the estimated cost of this final action for the CMAS NESHAP.

D. What are the economic impacts?

The document entitled *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking, discusses expected economic impacts, including the impacts to small entities, of this final action.

The EPA estimates the PV of the costs over the 15-year analytical period from 2027 to 2041 in accordance with Executive Orders 12866 and 13563. Costs are in 2024 dollars, and the EPA discounts them to 2025 at 3 and 7 percent discount rates per the recommendation in Office of Management and Budget (OMB) Circular A–4 (2003) and the EPA’s Guidelines for Preparing Economic Analyses (2024).^{50 51} The EPA also presents the EAV at 3 and 7 percent discount rates. The EAV takes the non-uniform stream of costs (i.e., different costs in different years) and converts them into a single annual value that, if paid each year from 2027 to 2041, would equal the original stream of values in PV terms.

The EPA estimates the PV of the costs over the 15-year period from 2027 to

2041 including the value of product recovery (i.e., the cost savings) to be \$72 million at a 3 percent discount rate and the EAV is \$6.1 million. Additionally, the EPA estimates the PV of the costs including the value of product recovery to be \$56 million at a 7 percent discount rate and the EAV is \$6.2 million.

This final action impacts 55 small entities, which own a total of 61 CMAS facilities. The EPA evaluates economic impacts of rulemakings on small entities by examining total annual cost estimates compared to the annual revenues of the companies (i.e., entities) that are the ultimate owners of the facilities affected by the rule. The EPA estimates cost-to-sales ratios, which are the total annual costs estimated for each entity divided by the entity’s annual revenues. This ratio provides a measure of the direct economic impact to ultimate owners of CMAS facilities.

The EPA estimates the average cost-to-sales ratio for small entities impacted by this final rule will be 0.18 percent with a maximum cost-to-sales ratio estimated at 1.37 percent, not considering the value of product recovery due to compliance. With product recovery, the EPA estimates that the average cost-to-sales ratio for small entities impacted by this final rule will be 0.14 percent with a maximum cost-to-sales ratio of 1.35 percent. The EPA estimates that approximately 5 percent of impacted small entities (three small entities out of a total of 55) will incur total annual costs greater than 1 percent of their annual revenue, and zero small entities will incur total annual costs greater than 3 percent of their annual revenue. The EPA does not anticipate that this final rule will have a substantial impact on a significant number of small entities. The EPA also does not expect this final rule to have significant market impacts or employment impacts. For more explanation of these economic impacts, refer to section VI.D of this preamble and the economic impact analysis accompanying this rulemaking.⁵²

E. What are the benefits?

The emissions impacts estimated for this final include reductions in HAP emissions. In keeping with longstanding practice, the EPA did not monetize the benefits from the estimated HAP emission reductions associated with this final action. The EPA currently does not have sufficient methods to monetize benefits associated with HAP reductions

and risk reductions for this rulemaking. While they are not monetized, the EPA expects that there will be health benefits associated with the estimated HAP emissions reductions. For additional information on the nonmonetized benefits of this rulemaking, refer to the economic impact analysis accompanying this rulemaking.⁵³

The emission impacts estimated for this final action include net reductions in VOC emissions. Consistent with the proposed rulemaking, the EPA was not able to monetize the health and environmental impacts associated with the estimated changes in criteria air pollutant emissions for this final rule, which includes changes in VOC emissions, which impact the formation of ground-level ozone. Specifically, the EPA did not attempt to monetize the health benefits of reductions in HAP emissions in this analysis due to methodology and data limitations.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that the EPA submitted to the OMB for review. Any changes made in response to Executive Order 12866 review have been documented in the docket. The EPA prepared an economic analysis of the potential costs and benefits associated with this action. This analysis, *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources*, is in the docket for this rulemaking.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is considered an Executive Order 14192 *de minimis* regulatory action, rendering this action exempt from applicable Executive Order 14192 requirements.

C. Paperwork Reduction Act (PRA)

The EPA submitted information collection activities in this rule for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 2323.10. You can find a copy of the ICR in the docket for this rulemaking, and it is briefly summarized here. The

⁵⁰ <https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf>.

⁵¹ https://www.epa.gov/system/files/documents/2024-12/guidelines-for-preparing-economic-analyses_final_508-compliant_compressed.pdf.

⁵² Refer to the document entitled *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources*, available in the docket for this rulemaking.

⁵³ *Id.*

information collection requirements are not enforceable until OMB approves them.

The EPA is finalizing amendments to the CMAS NESHAP to add new monitoring requirements for heat exchange systems, add monitoring requirements for pressure vessels, add new monitoring practices for PRDs, clarify regulatory provisions for vent control bypasses, and add practices for instrument monitoring of equipment in organic HAP service. In addition, the EPA is finalizing amendments to the CMAS NESHAP that add requirements for electronic reporting of NOCS, periodic reports, and performance test results and make other minor clarifications and corrections. The EPA will collect this information to ensure compliance with the CMAS NESHAP.

Respondents/affected entities:

Owners or operators of CMAS facilities.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart VVVVVV).

Estimated number of respondents: 251 (assumes 0 new respondents over the next three years).

Frequency of response: Initially, semiannually, and annually.

Total estimated burden: 10,700 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: Average annual cost is \$3,710,000 (per year) which includes \$2,530,000 annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the EPA will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities in this final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this action are small businesses with the CMAS categories (see section II.A of this preamble). The EPA identified 55 small entities that this final action will affect. The EPA has determined that three of the 251 facilities in the CMAS categories affected by this final action may experience an impact greater than 1 percent of their total annual revenue. The EPA estimates that these three

facilities will each incur approximately \$81,000 in total capital costs and \$31,000 in annual costs not including the value of product recovery (in 2024 dollars). Additional details of this analysis are presented in section V.D of this preamble and the document entitled *Economic Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million (adjusted annually for inflation) or more (in 1995 dollars) as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The costs involved in this action are estimated not to exceed \$187 million in 2024 dollars (\$100 million in 1995 dollars adjusted for inflation using the GDP implicit price deflator) or more in any one year.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This action will not impose substantial direct compliance costs on Federally recognized Tribal governments nor preempt Tribal law. Thus, Executive Order 13175 does not apply to this action.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA offered to consult with Tribal officials during the development of this action. A copy of that government-to-government consultation offer is in a letter dated January 8, 2025, in the docket for this rulemaking.⁵⁴

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health

and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. The final rule lowers HAP emissions and is projected to improve overall health for all individuals, including children.

However, EPA's *Policy on Children's Health* applies to this action. The EPA does not believe this final action affecting the nine CMAS categories will result in a disproportionate impact to children's health. While the EPA is finalizing provisions that will reduce HAP emissions (see sections IV.A through IV.C of this preamble), these emission reductions will not benefit children more significantly than any other group.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. The EPA expects this final action would not reduce crude oil supply, fuel production, coal production, natural gas production, or electricity production. The EPA estimates that this final action would have minimal impact on the amount of imports or exports of crude oils, condensates, or other organic liquids used in the energy supply industries. Given the minimal impacts on energy supply, distribution, and use as a whole nationally, no significant adverse energy effects are expected to occur.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. The EPA incorporates by reference and is finalizing VCS ASTM D6784–24, "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)" as an acceptable alternative to EPA Method 29 (referenced in the CMAS NESHAP at 40 CFR 63.11496(f)(3)(iii)) in this action with the following caveats. The EPA has approved this ASTM procedure as an alternative to EPA Method 29 only when the target compound is mercury,

⁵⁴ Docket ID No. EPA–HQ–OAR–2024–0303–0037.

and the ASTM procedure applies only to concentrations approximately 0.5 to 100 micrograms per cubic meter. This test method was developed initially for the measurement of mercury in coal-fired power plants; however, it has also been extensively used on other stationary combustion sources including sources having a flue gas composition with high levels of hydrochloric acid and low levels of sulfur dioxide. The test method includes equipment and procedures for obtaining samples from effluent ducts and stacks, equipment and procedures for laboratory analysis, and procedures for calculating results of elemental, oxidized, particle-bound, and total mercury emissions. ASTM D6784–24 is available at ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959.⁵⁵ The cost of obtaining these methods is not a significant financial burden, making the methods reasonably available to stakeholders.

As discussed in the proposal preamble, the EPA conducted searches for the CMAS NESHP through the Enhanced National Standards Systems Network Database managed by the American National Standards Institute. The EPA also conducted a review of voluntary consensus standards (VCS) organizations and accessed and searched their databases. The EPA conducted searches for EPA Methods 5, 5D, 21, and 29 of 40 CFR part 60, appendix A. During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's reference method, the EPA ordered a copy of the standard and reviewed it as a potential equivalent method. The EPA reviewed all potential standards to determine the practicality of the VCS for this rulemaking. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering, and policy equivalence to procedures in the EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS.

While the EPA identified seven other VCS as potentially applicable, the Agency decided these methods are impractical as alternatives because of the lack of equivalency, documentation, validation data, and other important technical and policy considerations. The EPA did not identify any applicable VCS for EPA Methods 5D and 21, and

none were brought to its attention in comments. The EPA documented the search and review results in the document entitled *Voluntary Consensus Standard Results for Technology Review of the National Emissions Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources*, which is in the docket for this rulemaking.⁵⁶ Additional information for the VCS search and determinations is in this document.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

- 1. The authority citation for part 63 continues to read as follows:

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

Subpart A—General Provisions

- 2. Amend § 63.14 by:
■ a. Redesignating paragraphs (i)(106) through (120) as (i)(107) through (121); and
■ b. Adding new paragraph (i)(106).
The addition reads as follows:

§ 63.14 Incorporations by reference.

* * * * *

(i) * * *

(106) ASTM D6784–24, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), Approved March 1, 2024; IBR approved for § 63.11496(f).

* * * * *

Subpart VVVVVV—National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

- 3. Amend § 63.11494 by revising paragraph (a)(2) introductory text, paragraphs (a)(2)(i), (c)(2)(iv), and (f) through (h) and adding paragraph (i) to read as follows:

§ 63.11494 What are the applicability requirements and compliance dates?

(a) * * *

(2) HAP listed in table 1 to this subpart (Table 1 HAP) are present in the CMPU, as specified in paragraph (a)(2)(i), (ii), (iii), or (iv) of this section.

(i) The CMPU uses as feedstock, any material that contains quinoline, manganese, and/or trivalent chromium at an individual concentration greater than 1.0 percent by weight, or any other Table 1 HAP at an individual concentration greater than 0.1 percent by weight. To determine the Table 1 HAP content of feedstocks, you may rely on formulation data provided by the manufacturer or supplier, such as the Safety Data Sheet (SDS) for the material. If the concentration in an SDS is presented as a range, use the upper bound of the range.

* * * * *

(c) * * *

(2) * * *

(iv) Manufacture of chemicals classified using the 2007 version of NAICS code 325222, 325314, 325413, or 325998.

* * * * *

(f) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart no later than March 21, 2013, except as specified otherwise in paragraph (i) of this section.

(g) If you start up a new affected source on or before October 29, 2009, you must achieve compliance with the applicable provisions of this subpart no later than October 29, 2009, except as specified otherwise in paragraph (i) of this section.

(h) If you start up a new affected source after October 29, 2009, you must achieve compliance with the provisions in this subpart upon startup of your affected source, except as specified otherwise in paragraph (i) of this section.

(i) All affected sources that commenced construction or reconstruction on or before January 22, 2025, must be in compliance with the requirements in §§ 63.11495(a)(6), (b)(4), and (e), 63.11496(e)(6)(iii), (f)(3)(iv), (f)(4), (g)(1)(iii), (g)(2)(ii), and (g)(4)(iii),

⁵⁵ <https://www.astm.org/>.

⁵⁶ Docket ID No. EPA–HQ–OAR–2024–0303–0005.

and 63.11499(d), item 5 to table 5 to this subpart, and item 1.c to table 8 to this subpart upon initial startup, or on April 1, 2029, whichever is later. All affected sources that commenced construction or reconstruction after January 22, 2025, must be in compliance with the requirements in §§ 63.11495(a)(6), (b)(4), and (e), 63.11496(e)(6)(iii), (f)(3)(iv), (f)(4), (g)(1)(iii), (g)(2)(ii), and (g)(4)(iii), and 63.11499(d), item 5 to table 5 to this subpart, and item 1.c to table 8 to this subpart upon initial startup, or on April 1, 2026, whichever is later.

■ 4. Amend § 63.11495 by:

- a. Revising paragraph (a) and paragraph (b) introductory text;
- b. Adding paragraph (b)(4);
- c. Revising paragraph (d); and
- d. Adding paragraph (e).

The revisions and additions read as follows:

§ 63.11495 What are the management practices and other requirements?

(a) *Management practices.* If you have a CMPU subject to this subpart, you must comply with paragraphs (a)(1) through (6) of this section.

(1) Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in organic HAP service or metal HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. This requirement does not apply to process vessels containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (*e.g.*, metal HAP that is in ingot, paste, slurry, or moist pellet form or other form).

(2) You must use any of the methods listed in paragraphs (a)(2)(i) through (iv) of this section to control total organic HAP emissions from transfer of liquids containing HAP listed in table 1 to this subpart to tank trucks or railcars. You are not required to comply with this paragraph (a)(2) if you have notified the Administrator in your initial notification that a material is reactive or resinous, and you will not be able to comply with any of the methods in paragraphs (a)(2)(i) through (iv) of this section for the transfer of such material.

(i) Use submerged loading or bottom loading.

(ii) Route emissions to a fuel gas system or process in accordance with § 63.982(d).

(iii) Vapor balance back to the storage tank or another storage tank connected by a common header.

(iv) Vent through a closed-vent system to a control device.

(3) Except as specified in paragraph (a)(6) of this section, you must conduct inspections of process vessels and equipment for each CMPU in organic HAP service or metal HAP service, as specified in paragraphs (a)(3)(i) through (v) of this section, to demonstrate compliance with paragraph (a)(1) of this section and to determine that the process vessels and equipment are sound and free of leaks. Alternatively, except when the subject CMPU contains metal HAP as particulate, inspections may be conducted while the subject process vessels and equipment are in VOC service, provided that leaks can be detected when in VOC service.

(i) Inspections must be conducted at least quarterly.

(ii) For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless you demonstrate that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, you must still perform the inspection and demonstration in the next quarterly monitoring period.

(iii) As an alternative to conducting inspections, as specified in paragraph (a)(3)(ii) of this section, you may use Method 21 of 40 CFR part 60, appendix A–7, with a leak definition of 500 ppmv to detect leaks. You may also use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection conducted in accordance with paragraph (a)(3)(ii) of this section are due to a condition other than loss of HAP. The procedures in this paragraph (a)(3)(iii) may not be used as an alternative to the inspection required by paragraph (a)(3)(ii) of this section for process vessels that contain metal HAP as particulate.

(iv) Inspections must be conducted while the subject CMPU is operating.

(v) No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in organic HAP service or metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required.

(4) Except as specified in paragraph (a)(6) of this section, you must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of this paragraph (a)(4), a leak will be considered “repaired” if a condition specified in paragraph (a)(4)(i), (ii), or (iii) of this section is met.

(i) The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; or

(ii) No bubbles are observed at potential leak sites during a leak check using soap solution; or

(iii) The system will hold a test pressure.

(5) Except as specified in paragraph (a)(6) of this section, you must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair.

(6) Beginning no later than the compliance dates specified in § 63.11494(i) for equipment in organic HAP service, as determined by § 63.180(d), paragraphs (a)(3) through (5) of this section no longer apply. Instead, you must comply with the requirements specified in paragraphs (a)(6)(i) through (xiv) of this section. Equipment that is in vacuum service is excluded from the requirements of this paragraph (a)(6). Equipment that is in organic HAP service less than 300 hours per calendar year is excluded from the requirements of this paragraph (a)(6) if it is identified as required in § 63.11501(c)(9)(i)(D).

(i) Except as specified in paragraph (a)(6)(ii) of this section, conduct leak detection monitoring annually for all pumps in light liquid service, valves in gas/vapor service and in light liquid service, and connectors in gas/vapor service and in light liquid service as specified in paragraphs (a)(6)(i)(A) through (C) of this section.

(A) Use the method specified in § 63.180(b)(1) through (3).

(B) The calibration gases must be zero air (less than 10 ppm of hydrocarbon in air); and methane and air at a concentration of 10,000 ppm methane. At the end of each monitoring day, check the instrument using the same calibration gas that was used to calibrate the instrument before use. Follow the procedures specified in Method 21 of 40 CFR part 60, appendix A–7, section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. If multiple scales are used, record the instrument reading for each scale used. Divide the arithmetic difference of the initial and post-test calibration response by the corresponding calibration gas value for each scale and multiply by 100 to express the calibration drift as a percentage. If a calibration drift assessment shows a negative drift of more than 10 percent, then re-monitor all equipment monitored since the last calibration with instrument readings between the leak definition and the leak definition multiplied by (100 minus the

percent of negative drift) divided by 100. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at your discretion, all equipment with instrument readings above the leak definition and below the leak definition multiplied by (100 plus the percent of positive drift) divided by 100 monitored since the last calibration may be re-monitored.

(C) The instrument reading that defines a leak is 10,000 ppm or greater. When a leak is detected, the following requirements apply:

(1) Clearly identify the leaking equipment. A weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the equipment must be removed after it is repaired.

(2) A first attempt at repair must be made no later than 5 calendar days after the leak is detected.

(3) The piece of equipment must be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (a)(6)(viii) of this section.

(4) The leak is repaired when instrument re-monitoring of the equipment does not detect a leak.

(5) It is a deviation to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a deviation. However, if the repairs are unsuccessful, a leak is detected and you must take further action as required by applicable provisions of this paragraph (a)(6).

(ii) The following types of equipment are exempt from the monitoring requirements specified in paragraph (a)(6)(i) of this section if the equipment meets one of the requirements in paragraphs (a)(6)(ii)(A) through (E) of this section.

(A) Any pump in light liquid service, valve in gas/vapor service or light liquid service, or connector in gas/vapor service or light liquid service that is designated as unsafe-to-monitor if:

(1) You determine that the pump, valve, or connector is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a)(6)(i) of this section; and

(2) You have a written plan that requires monitoring of the pump, valve, or connector as frequently as practical during safe-to-monitor times, but not more frequently than the annual leak detection monitoring.

(B) Any pump in light liquid service if it meets one of the requirements in § 63.163(e)(1) through (6), (f), or (g). If the pump is located within the boundary of an unmanned plant site then it is exempt from the weekly visual inspection requirement of § 63.163(e)(4), and the daily requirements of § 63.163(e)(5), provided that each pump is visually inspected as often as practicable and at least monthly.

(C) Any valve in gas/vapor service or light liquid service that is designated as a difficult-to-monitor valve if:

(1) You determine that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The CMPU within which the valve is located is an existing source or you designate less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

(3) You follow a written plan that requires monitoring of the valve as frequently as practical, but not more frequently than the annual leak detection monitoring.

(D) Any connector in gas/vapor service or light liquid service that is designated as an unsafe-to-repair connector if:

(1) You determine that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a)(6)(i) of this section; and

(2) The connector will be repaired before the end of the next scheduled CMPU shutdown.

(E) Any connector in gas/vapor service or light liquid service that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined); however, if any inaccessible or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, a first attempt at repair must be made no later than 5 calendar days after the leak is detected. The leak must be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraphs (a)(6)(viii) and (a)(6)(ii)(D) of this section. An inaccessible connector is defined in § 63.11502(b).

(iii) For compressors, comply with the requirements in § 63.164.

(iv) For pressure relief devices in gas/vapor service or light liquid service, comply with the requirements in § 63.165(e)(1) through (8), except as specified in paragraphs (a)(6)(iv)(A) through (D) of this section.

(A) Substitute “violation” with “deviation”.

(B) Section 63.165(e)(3)(v)(D) does not apply.

(C) Substitute each occurrence of April 25, 2023 with April 1, 2026.

(D) Substitute the occurrence of July 15, 2027 with April 1, 2029.

(v) For sampling connection systems, comply with the requirements in § 63.166.

(vi) For open-ended valves or lines, comply with the requirements in § 63.167.

(vii) For pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service, comply with the requirements in § 63.169 except a leak is detected if the instrument reading equals or exceeds 10,000 ppmv for pumps, valves, and connectors instead of the leak definitions specified in § 63.169(b).

(viii) For delay of repair, comply with the requirements in § 63.171 except the phrase “Except as specified in paragraph (f) of this section,” and § 63.171(f) do not apply.

(ix) For closed vent systems and control devices, comply with the requirements in § 63.172 except as specified in paragraphs (a)(6)(ix)(A) through (G) of this section.

(A) Substitute “§ 63.162(b) of this subpart” with “paragraph (a)(6)(xi) of this section”.

(B) Section 63.172(d) does not apply.

(C) Flares used to comply with this paragraph (a)(6) must comply with the requirements in subpart SS of this part.

(D) Substitute “violation” with “deviation”.

(E) Substitute “For each source as defined in § 63.101, and for each source as defined in § 63.191, beginning no later than the compliance dates specified in § 63.100(k)(10)” with “For each affected source as described in § 63.11494(d), beginning no later than the compliance dates specified in § 63.11494(i)”.

(F) Substitute “After the compliance dates specified in § 63.100 of subpart F of this part” with “After the compliance dates specified in § 63.11494(i)”.

(G) Substitute “periodic report required by § 63.182(d)” with “semiannual compliance report required by paragraph (a)(6)(xiv) of this section”.

(x) For agitators in gas/vapor service and in light liquid service, comply with the requirements in § 63.173.

(xi) You may use the alternative means of emission limitation provided in §§ 63.178 and 63.179. You may also request a determination of alternative means of emission limitation to the requirements in this paragraph (a)(6) as provided in § 63.177. If the

Administrator makes a determination that an alternative means of emission limitation is permissible, you must comply with the alternative.

(A) Substitute “§§ 63.163 through 63.171 and §§ 63.173 through 63.176” and “§ 63.163, through 63.171, and §§ 63.173 and 63.174 of this subpart” with “paragraphs (a)(6)(i) through (viii) and (x) of this section”.

(B) Substitute “§ 63.181” with “§ 63.11501(c)(9)”.

(C) Substitute “§ 63.163, §§ 63.168 and 63.169, and §§ 63.173 through 63.176 of this subpart” with “paragraphs (a)(6)(i), (ii), and (vii) through (x) of this section”.

(D) Substitute “§ 63.180(b) of this subpart” with “paragraph (a)(6)(i)(A) and (B) of this section”.

(E) Substitute “§§ 63.163 through 63.170, and §§ 63.172 through 63.176 of this subpart” with “paragraphs (a)(6)(i) through (vii), (ix), and (x) of this section”.

(F) Substitute “§ 63.174 of this subpart” with “paragraph (a)(6)(i) of this section”.

(G) Section 63.178(c)(3)(iii) and (iv) does not apply.

(H) Substitute “§ 63.172 of this subpart” with “paragraph (a)(6)(ix) of this section”.

(xii) Keep records as specified in § 63.11501(c)(9).

(xiii) Submit the Notification of Compliance Status as specified in § 63.11501(b)(6).

(xiv) Submit the Semiannual Compliance Report as specified in § 63.11501(d)(9).

(b) *Small heat exchange systems.* For each heat exchange system subject to this subpart with a cooling water flow rate less than 8,000 gallons per minute (gal/min) and not meeting one or more of the conditions in § 63.104(a)(1) through (4), you must comply with paragraphs (b)(1) through (4) of this section, or as an alternative, you may comply with any one of the requirements in item 1.a, 1.b, or 1.c of table 8 to this subpart. Beginning on April 1, 2029, for purposes of compliance with this paragraph (b), § 63.104(a)(3) and (4) no longer apply.

(4) Beginning no later than the compliance dates specified in § 63.11494(i), you must not inject water into or dispose of water in the heat exchange system if the water is considered wastewater as defined in § 63.11502.

(d) *General duty.* At all times, you must operate and maintain any affected CMPU, including associated air

pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.

Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the CMPU.

(e) *Bypass provisions.* Beginning no later than the compliance dates specified in § 63.11494(i), the use of a bypass line at any time on a closed vent system to divert emissions subject to any of the requirements in §§ 63.11495 through 63.11498 to the atmosphere, or to a control device not meeting the requirements specified in §§ 63.11495 through 63.11498, is an emissions standards deviation. If you are subject to the bypass monitoring requirements of § 63.983(a)(3), then you must continue to comply with the requirements in § 63.983(a)(3) and the recordkeeping and reporting requirements in §§ 63.998(d)(1)(ii) and 63.999(c)(2)(ii) and (iii), except the phrase “Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines” in § 63.983(a)(3) does not apply. Instead, the exemptions specified in paragraphs (e)(1) and (2) of this section apply. Owners or operators of closed-vent systems and control devices used to comply with the equipment leak provisions specified in paragraph (a)(6)(ix) of this section are not subject to this paragraph (e).

(1) Except for pressure relief devices subject to § 63.165(e)(4), equipment such as low leg drains and equipment subject to the requirements specified in paragraph (a)(6) of this section are not subject to this paragraph (e).

(2) Open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 CFR 60.482–6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as 40 CFR 60.482–6(a)(2), (b), and (c) are not subject to this paragraph (e).

■ 5. Amend § 63.11496 by:

■ a. Revising paragraphs (a)(3), (e)(6), (f)(3) through (5), and (g)(1) through (4); and

■ b. Removing and reserving paragraph (g)(5).

The revisions read as follows:

§ 63.11496 What are the standards and compliance requirements for process vents?

(a) * * *

(3) If your current estimate is that emissions from batch process vents from a CMPU are less than 10,000 lb/yr, then you must keep a record of the number of batches of each process operated per month. Also, you must reevaluate your total emissions from batch process vents prior to making any process changes that affect emission calculations in paragraphs (a)(1) and (2) of this section. If projected emissions increase to 10,000 lb/yr or more, you must be in compliance with the options for batch process vents in table 2 to this subpart upon initiating operation under the new operating conditions. You must maintain records documenting the results of all updated emissions calculations.

* * * * *

(e) * * *

(6) Except as specified in paragraphs (e)(6)(i) through (iii) of this section, the CEMS requirements and data reduction requirements for CEMS specified in § 63.2450(j) apply.

(i) Substitute April 1, 2026” for “August 12, 2020” in § 63.2450(j)(1).

(ii) Section 63.2450(j)(3) does not apply. Instead, you must conduct a performance evaluation of each CEMS according to the requirements in § 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B, except that the schedule in § 63.8(e)(4) does not apply, and before January 22, 2025, the results of the performance evaluation must be included in the notification of compliance status report. Beginning on and after January 22, 2025, the results of the performance evaluation must be submitted in accordance with § 63.2520(g).

(iii) Substitute “§ 63.11494(i)” for each occurrence of “§ 63.2445(g)”.

(f) * * *

(3) If you have an existing source subject to the HAP metals emission limits specified in table 4 to this subpart, you must comply with the initial and continuous compliance and monitoring requirements in paragraphs (f)(3)(i) through (iv) of this section. You must keep records of monitoring results to demonstrate continuous compliance.

(i) You must prepare a monitoring plan containing the information in paragraphs (f)(3)(i)(A) through (E) of this section. The plan must be maintained on-site and be available on request. You

must operate and maintain the control device according to a site-specific monitoring plan at all times.

(A) A description of the device;

(B) Results of a performance test or engineering assessment conducted in accordance with paragraph (f)(3)(ii) of this section verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart;

(C) Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-term maintenance) and continuous monitoring system (CMS);

(D) A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and

(E) Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment.

(ii) Except as specified in paragraph (f)(3)(iv) of this section, you must conduct a performance test or an engineering assessment for each CMPU subject to a HAP metals emissions limit in table 4 to this subpart and on or before June 1, 2026 report the results in your Notification of Compliance Status (NOCS), after June 1, 2026 include a summary of results of a performance test submitted according to paragraph (g)(1)(iv) of this section and the results of an engineering assessment in your NOCS. If the performance test was not submitted according to paragraph (g)(1)(iv) of this section, submit the complete report with the NOCS. Each performance test or engineering assessment must be conducted under representative operating conditions, and sampling for each performance test must be conducted at both the inlet and outlet of the control device. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent the entire range of normal operation, including operational conditions for maximum emissions if such emissions are not expected during maximum production. You shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. If you own or operate an existing affected source, you are not required to conduct the initial performance test if a prior performance test was conducted within

the 5 years prior to the effective date using the same methods specified in paragraph (f)(3)(iii) of this section, and, either no process changes have been made since the test, or, if you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(iii) Except as specified in paragraph (f)(3)(iv) of this section, if you elect to conduct a performance test, it must be conducted according to requirements in § 63.11410(j)(1). As an alternative to conducting a performance test using Method 5 or 5D to determine the concentration of PM, you may use Method 29 of 40 CFR part 60, appendix A–8 of this chapter to determine the concentration of HAP metals. ASTM D6784–24 (incorporated by reference, see § 63.14) may also be used in lieu of Method 29, if the target compound is mercury and concentrations are approximately 0.5 to 100 micrograms per cubic meter. You have demonstrated compliance if the overall reduction of either HAP metals or total PM is equal to or greater than 95 percent.

(iv) Beginning on the compliance dates specified in § 63.11494(i), the option to use an engineering assessment (as specified in paragraph (f)(3)(ii) of this section for determining compliance with a HAP metals emissions limit in table 4 to this subpart) no longer applies. Instead, you must comply with the performance test requirements in paragraphs (f)(3)(ii) and (iii) of this section. If a performance test has never been conducted, conduct an initial performance test no later than the compliance dates specified in § 63.11494(i) or within 180 days after startup of the source, whichever is later. Begin conducting subsequent performance tests no later than the compliance dates specified in § 63.11494(i) or 60 calendar months after the previous performance test, whichever is later.

(4) If you have a new source using a baghouse as a control device, you must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metals emissions limit in table 4 to this subpart. You must comply with the testing, monitoring, and recordkeeping requirements in § 63.11410(g), (i), and (j)(1), except you are not required to submit the monitoring plan required by § 63.11410(g)(2) for approval. If a performance test has never been conducted, conduct an initial performance test no later than the compliance dates specified in § 63.11494(i) or within 180 days after startup of the source, whichever is later.

Begin conducting subsequent performance tests no later than the compliance dates specified in § 63.11494(i) or 60 calendar months after the previous performance test, whichever is later.

(5) If you have a new source using a control device other than a baghouse to comply with the HAP metals emission limits in table 4 to this subpart, you must comply with the initial and continuous compliance and monitoring requirements in paragraphs (f)(3)(i) through (iv) of this section.

(g) * * *

(1) *Requirements for performance tests.* (i) If you are complying with a percent reduction, mass emission limit, or outlet concentration performance standard in table 2 to this subpart for batch process vents or in table 3 to this subpart for continuous process vents, then the requirements specified in paragraphs (g)(1)(ii) through (iv) of this section and in § 63.2450(g)(1) through (4) apply instead of, or in addition to, the requirements specified in subpart SS of this part.

(ii) Upon request, you shall make available to the Administrator, such records as may be necessary to determine the conditions of performance tests.

(iii) If a performance test has never been conducted, conduct an initial performance test no later than 180 days after the compliance dates specified in § 63.11494(i). Begin conducting subsequent performance tests no later than 180 days after the compliance dates specified in § 63.11494(i) or 60 calendar months after the previous performance test, whichever is later. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent the entire range of normal operation, including operational conditions for maximum emissions if such emissions are not expected during maximum production. The owner or operator may not conduct performance tests during periods of malfunction.

(iv) Beginning on June 1, 2026 within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedure specified in § 63.9(k). Submit the data in a file format generated using the EPA's Electronic Reporting Tool (ERT). Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic->

reporting-tool-ert) accompanied by the other information required by § 63.7(g)(2) in PDF format.

(2) *Design evaluation.* (i) Except as specified in paragraph (g)(2)(ii) of this section, to determine initial compliance with a percent reduction or outlet concentration emission limit, you may elect to conduct a design evaluation as specified in § 63.1257(a)(1) instead of a performance test as specified in subpart SS of this part. You must establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For batch process vents, the design evaluation must be conducted under worst-case conditions, as specified in § 63.2460(c)(2).

(ii) Beginning on the compliance dates specified in § 63.11494(i), paragraph (g)(2)(i) of this section does not apply. Instead, the owner or operator must comply with the performance test requirements in paragraph (g)(1) of this section.

(3) *Outlet concentration correction for combustion devices.* When § 63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3 percent oxygen if you add supplemental combustion air, the requirements in either paragraph (g)(3)(i) or (ii) of this section apply for the purposes of this subpart.

(i) You must correct the concentration in the gas stream at the outlet of the combustion device to 3 percent oxygen if you add supplemental gases, as defined in § 63.2550, to the vent stream, or;

(ii) You must correct the measured concentration for supplemental gases using equation 1 to § 63.2460(e)(6); you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

(4) *Continuous parameter monitoring.* The provisions in § 63.2450(k)(1) through (7) apply in addition to the requirements for continuous parameter monitoring systems (CPMS) in subpart SS of this part, except as specified in paragraphs (g)(4)(i) through (iii) of this section.

(i) You may measure pH or caustic strength of the scrubber effluent at least once per day for any halogen scrubber within a CMPU subject this section.

(ii) The requirements in § 63.2450(k)(6) to request approval of a procedure to monitor operating

parameters does not apply for the purposes of this subpart. You must provide the required information in your NOCS report required by § 63.11501(b).

(iii) In § 63.2450(k)(7), substitute “§ 63.11494(i)” for “§ 63.2445(g)”.

* * * * *

■ 6. Amend § 63.11497 by revising paragraphs (a) and (c) and adding paragraphs (e) and (f) to read as follows:

§ 63.11497 What are the standards and compliance requirements for storage tanks?

(a) *Organic HAP emissions from storage tanks.* You must comply with the emission limits and other requirements in table 5 to this subpart and in paragraphs (b) through (f) of this section for organic HAP emissions from each of your storage tanks that meet the applicability criteria in table 5 to this subpart.

* * * * *

(c) *SSM provisions.* References to SSM provisions in subparts that are referenced in paragraphs (a) or (b) of this section or table 5 to this subpart do not apply.

* * * * *

(e) *Pressure vessels.* If you are required to comply with this paragraph (e) as specified in item 5 of table 5 to this subpart (for each pressure vessel with a design capacity greater than or equal to 20,000 gallons), you must operate and maintain the pressure vessel, as specified in paragraphs (e)(1) through (5) of this section.

(1) The pressure vessel must be designed to operate with no detectable emissions at all times.

(2) Except for equipment that meet the criteria specified in § 63.11495(a)(6)(ii)(A) (for valves, connectors, and pumps in gas/vapor service and in light liquid service that are unsafe to monitor), § 63.11495(a)(6)(ii)(C) (for valves in gas/vapor service and in light liquid service that are difficult-to-monitor), and § 63.11495(a)(6)(ii)(E) (for connectors in gas/vapor service and in light liquid service that are inaccessible or ceramic or ceramic-lined), you must monitor each point on the pressure vessel through which organic HAP could potentially be emitted by conducting initial and annual performance tests using Method 21 of appendix A–7 to part 60 of this chapter.

(3) Each instrument reading greater than 500 ppmv is a deviation.

(4) Estimate the flow rate and total regulated material emissions from the defect. Assume the pressure vessel has been emitting for half of the time since

the last performance test, unless other information supports a different assumption.

(5) Whenever organic HAP are in the pressure vessel, you must operate the pressure vessel as a closed system that vents through a closed vent system to either a control device (other than a flare) in accordance with § 63.982(c); or a flare in accordance with § 63.982(b). For purposes of compliance with this paragraph, a release of organic HAP through a pressure vessel's pressure relief device to the atmosphere is a deviation.

(f) *Exceptions and alternatives to subpart SS of this part.* If you are complying with a percent reduction, mass emission limit, or outlet concentration performance standard in table 5 to this subpart for storage tanks, then the provisions in paragraphs (f)(1) and (2) of this section apply in addition to the provisions in subpart SS of this part.

(1) *Requirements for performance tests.* (i) The requirements specified in paragraphs (f)(1)(ii) through (iv) of this section apply instead of, or in addition to, the requirements specified in subpart SS of this part.

(ii) Upon request, you shall make available to the Administrator, such records as may be necessary to determine the conditions of performance tests.

(iii) If a performance test has never been conducted, conduct an initial performance test no later than 180 days after the compliance dates specified in § 63.11494(i). Begin conducting subsequent performance tests no later than 180 days after the compliance dates specified in § 63.11494(i) or 60 calendar months after the previous performance test, whichever is later. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent the entire range of normal operation, including operational conditions for maximum emissions if such emissions are not expected during maximum production.

(iv) Beginning on June 1, 2026, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedure specified in § 63.9(k). Submit the data in a file format generated using the EPA's Electronic Reporting Tool (ERT). Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website (<https://www.epa.gov/electronic->

reporting-air-emissions/electronic-reporting-tool-ertf) accompanied by the other information required by § 63.7(g)(2) in PDF format.

(2) *Design evaluation.* Beginning on the compliance dates specified in § 63.11494(i), the option to use a design evaluation to demonstrate compliance in § 63.985(b)(1)(i) does not apply. Instead, the owner or operator must comply with the performance test requirements in § 63.985(b)(1)(ii) and paragraph (f)(1) of this section.

■ 7. Amend § 63.11498 by revising paragraph (a) introductory text and paragraph (b) to read as follows:

§ 63.11498 What are the standards and compliance requirements for wastewater systems?

(a) You must comply with the requirements in paragraph (a)(1) and (2) of this section and in table 6, item 1 to this subpart for all wastewater streams from a CMPU subject to this subpart. If the partially soluble HAP concentration in a wastewater stream is equal to or greater than 10,000 ppmw and the wastewater stream contains a separate organic phase, then you must also comply with table 6, item 2 to this subpart for that wastewater stream. Partially soluble HAP are listed in table 7 to this subpart.

* * * * *

(b) References to SSM provisions in subparts that are referenced in paragraph (a) of this section or table 6 to this subpart do not apply.

■ 8. Amend § 63.11499 by revising paragraph (a) and adding paragraph (d) to read as follows:

§ 63.11499 What are the standards and compliance requirements for heat exchange systems?

(a) Except as specified in paragraph (d) of this section, if the cooling water flow rate in your heat exchange system is equal to or greater than 8,000 gal/min and is not meeting one or more of the conditions in § 63.104(a)(1) through (4), then you must comply with one of the requirements specified in table 8 to this subpart.

* * * * *

(d) If you are required to comply with the requirements in § 63.104(f) through (j) and (l) as specified in item 1.c of table 8 to this subpart (for heat exchange systems with a cooling water flow rate greater than or equal to 8,000 gal/min), then you must also comply with the requirements in paragraphs (d)(1) through (6) of this section.

(1) Replace each occurrence of “For each source as defined in § 63.101,” with “For each affected source as described in § 63.11494(d),”.

(2) Replace each reference to § 63.100(k)(10) with § 63.11494(i).

(3) Replace each occurrence of “semi-annual periodic report required by § 63.152(c)”, “semi-annual periodic report”, or “periodic report” with “semiannual compliance report”.

(4) The phrase “Except as specified in paragraph (g)(6) of this section,” in § 63.104(g)(4) does not apply.

(5) Section 63.104(g)(6) and (h)(6) do not apply.

(6) Beginning no later than the compliance dates specified in § 63.11494(i), you must not inject water into or dispose of water in the heat exchange system if the water is considered wastewater as defined in § 63.11502.

■ 9. Amend § 63.11500 by revising paragraphs (a)(2) and (b) to read as follows:

§ 63.11500 What compliance options do I have if part of my plant is subject to both this subpart and another Federal standard?

* * * * *

(a) * * *

(2) After the compliance dates specified in § 63.11494, at an offsite reloading or cleaning facility subject to § 63.1253(f), as referenced from § 63.2470(e) and table 5 to this subpart, compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part constitutes compliance with the monitoring, recordkeeping, and reporting provisions of § 63.1253(f)(7)(ii) or (iii). You must identify in your notification of compliance status report required by § 63.11501(b) the subpart of this part with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) *Compliance with subparts of part 60 of this chapter.* If any part of a CMPU that is subject to the provisions of this subpart is also subject to the provisions of subpart VV, VVa, VVb, DDD, III, IIIa, NNN, NNNa, RRR, or RRRa in part 60 of this chapter, then compliance with any of the requirements in part 60 of this chapter, subpart VV, VVa, VVb, DDD, III, IIIa, NNN, NNNa, RRR, or RRRa that are at least as stringent as the corresponding requirements in this subpart constitutes compliance with this subpart.

* * * * *

■ 10. Amend § 63.11501 by:

■ a. Revising the section heading and paragraph (b) introductory text;

■ b. Adding paragraph (b)(6);

■ c. Revising paragraphs (c) and (d); and

■ d. Removing paragraph (e).

The revisions and addition read as follows:

§ 63.11501 What are the notification, recordkeeping, and reporting requirements?

* * * * *

(b) *Notification of compliance status (NOCS).* Beginning August 31, 2026, the owner or operator must submit all subsequent Notification of Compliance Status reports in PDF format to the EPA following the procedure specified in § 63.9(k). Your NOCS required by § 63.9(h) must include the following additional information specified in paragraphs (b)(1) through (5) of this section, as applicable. Within 150 days after the first applicable compliance date, you must also submit the information in paragraph (b)(6) of this section for equipment subject to the requirements of § 63.11495(a)(6).

* * * * *

(6) For equipment subject to the requirements of § 63.11495(a)(6), you must also submit the information specified in paragraphs (b)(6)(i) through (iv) of this section.

(i) CMPU identification,

(ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service; and

(iii) Method of compliance with the standard (e.g., “annual leak detection and repair” or “equipped with dual mechanical seals”).

(iv) For pressure relief devices subject to the pressure release management work practice standards in § 63.165(e), you must submit the information listed in paragraphs (b)(6)(iv)(A) and (B) of this section.

(A) A description of the monitoring system to be implemented, including the relief devices and process parameters to be monitored, and a description of the alarms or other methods by which operators will be notified of a pressure release.

(B) A description of the prevention measures to be implemented for each affected pressure relief device.

(c) *Recordkeeping.* You must maintain files of all information required by this subpart for at least 5 years following the date of each occurrence according to the requirements in § 63.10(b)(1). If you are subject, you must comply with the recordkeeping and reporting requirements of § 63.10(b)(2)(iii) and (vi) through (xiv), and the applicable requirements specified in paragraphs (c)(1) through (11) of this section.

(1) For each CMPU subject to this subpart, you must keep the records specified in paragraphs (c)(1)(i) through (viii) of this section.

(i) Except as specified in paragraph (c)(9) of this section, records of management practice inspections,

repairs, and reasons for any delay of repair, as specified in § 63.11495(a)(5).

(ii) Except as specified in paragraph (c)(11) of this section, records of small heat exchange system inspections, demonstrations of indications of leaks that do not constitute leaks, repairs, and reasons for any delay in repair as specified in § 63.11495(b).

(iii) If batch process vent emissions are less than 10,000 lb/yr for a CMPU, records of batch process vent emission calculations, as specified in § 63.11496(a)(1), the number of batches operated each month, as specified in § 63.11496(a)(3), and any updated emissions calculations, as specified in § 63.11496(a)(3). Alternatively, keep records of the worst-case processes or organic HAP usage, as specified in § 63.11496(a)(2) and (4), respectively.

(iv) Records of all TRE calculations for continuous process vents as specified in § 63.11496(b)(2).

(v) Records of metal HAP emission calculations as specified in § 63.11496(f)(1) and (2). If total uncontrolled metal HAP process vent emissions from a CMPU subject to this subpart are estimated to be less than 400 lb/yr, also keep records of either the number of batches per month or operating hours, as specified in § 63.11496(f)(2).

(vi) Records identifying wastewater streams and the type of treatment they receive, as specified in table 6 to this subpart.

(vii) Before April 1, 2029, records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this subpart that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. After April 1, 2029, for any deviation, records of the start date, start time, duration in hours, cause, a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

(viii) Before April 1, 2029, records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11495(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. After April 1, 2029, for any deviation, records of

actions taken to minimize emissions in accordance with § 63.11495(d), and any corrective action taken to return the affected unit to its normal or usual manner of operation.

(2) For batch process vents subject to table 2 to this subpart and continuous process vents subject to table 3 to this subpart, you must keep records specified in paragraphs (c)(2)(i) or (ii) of this section, as applicable.

(i) If you route emissions to a control device other than a flare, keep records of performance tests, if applicable, as specified in § 63.998(a)(2)(ii) and (4), keep records of the monitoring system and the monitored parameters, as specified in § 63.998(b) and (c), and keep records of the closed-vent system, as specified in § 63.998(d)(1). If you use a recovery device to maintain the TRE above 1.0 for a continuous process vent, keep records of monitoring parameters during the TRE index value determination, as specified in § 63.998(a)(3).

(ii) If you route emissions to a flare, keep records of the flare compliance assessment, as specified in § 63.998(a)(1)(i), keep records of the pilot flame monitoring, as specified in § 63.998(a)(1)(ii) and (iii), and keep records of the closed-vent system, as specified in § 63.998(d)(1).

(3) For metal HAP process vents subject to table 4 to this subpart, you must keep records specified in paragraph (c)(3)(i) or (ii) of this section, as applicable.

(i) For a new source using a control device other than a baghouse and for any existing source, maintain a monitoring plan, as specified in § 63.11496(f)(3)(i), and keep records of monitoring results, as specified in § 63.11496(f)(3).

(ii) For a new source using a baghouse to control metal HAP emissions, keep a site-specific monitoring plan, as specified in §§ 63.11496(f)(4) and 63.11410(g), and keep records of bag leak detection systems, as specified in §§ 63.11496(f)(4) and 63.11410(g)(4).

(4) For each storage tank subject to table 5 to this subpart, you must keep records specified in paragraphs (c)(4)(i) through (vii) of this section, as applicable.

(i) Keep records of the vessel dimensions, capacity, and liquid stored, as specified in § 63.1065(a).

(ii) Keep records of each inspection of an internal floating roof, as specified in § 63.1065(b)(1).

(iii) Keep records of each seal gap measurement for external floating roofs, as specified in § 63.1065(b)(2), and keep records of inspections of external

floating roofs, as specified in § 63.1065(b)(1).

(iv) If you vent emissions to a control device other than a flare, keep records of the operating plan and measured parameter values, as specified in §§ 63.985(c) and 63.998(d)(2).

(v) If you vent emissions to a flare, keep records of all periods of operation during which the flare pilot flame is absent, as specified in §§ 63.987(c) and 63.998(a)(1), and keep records of closed-vent systems, as specified in § 63.998(d)(1).

(vi) For periods of planned routine maintenance of a control device, keep records of the day and time at which each maintenance period begins and ends, and keep records of the type of maintenance performed, as specified in § 63.11497(b)(3).

(vii) For each pressure vessel subject to the requirements of § 63.11497(f) you must keep records as specified in paragraphs (c)(4)(vii)(A) and (B) of this section.

(A) The date of each performance test conducted according to § 63.11497(f)(2).

(B) The record of each performance test conducted according to § 63.11497(f)(2), including the following:

(1) Date each defect was detected and the instrument reading (in ppmv) during the performance test.

(2) Date of the next performance test that shows the instrument reading is less than 500 ppmv and the instrument reading (in ppmv) during the performance test.

(3) Start and end dates of each period after the date in paragraph (c)(4)(ix)(B)(1) of this section when the pressure vessel was completely empty.

(4) Estimated emissions from each defect.

(5) For each wastewater stream subject to item 2 in table 6 to this subpart, keep records of the wastewater stream identification and the disposition of the organic phase(s), as specified in item 2 to table 6 to this subpart.

(6) Except as specified in paragraph (c)(11) of this section, for each large heat exchange system subject to table 8 to this subpart, you must keep records of detected leaks; the date the leak was detected; if demonstrated not to be a leak, the basis for that determination; the date of efforts to repair the leak; and the date the leak is repaired, as specified in table 8 to this subpart.

(7) You must keep a record of all transferred liquids that are reactive or resinous materials, as defined in § 63.11502(b), and not included in the NOCS.

(8) For continuous process vents subject to table 3 to this subpart, keep records of the occurrence and duration of each startup and shutdown of operation of process equipment, or of air pollution control and monitoring equipment.

(9) If you are subject to the equipment leak requirements specified in § 63.11495(a)(6), then you must keep records as specified in paragraphs (c)(9)(i) through (vii) of this section instead of the records specified in paragraph (c)(1)(i) of this section.

(i) Keep a list, summary description, or diagram(s) showing the location and identification number of all equipment in organic HAP service at the facility and the information in paragraphs (c)(9)(i)(A) through (D) of this section.

(A) Identification of equipment designated as unsafe to monitor, difficult to monitor, unsafe to inspect, difficult to inspect, or unsafe to repair and the plan for monitoring or inspecting this equipment, as applicable.

(B) Identification of the equipment in batch process units, for which you do not elect to pressure test the batch product process equipment train.

(C) Identification of the equipment in heavy liquid service.

(D) Identification of the equipment in organic HAP service less than 300 hours per calendar year.

(ii) For leak detection monitoring and inspections required by paragraphs § 63.11495(a)(6) (e.g., monitoring using Method 21 of appendix A–7 to part 60 of this chapter; visible, audible, or olfactory monitoring; closed vent system inspections; and batch process unit monitoring), record the date of the monitoring or inspection and include a statement of whether leaks were detected. If no leaks are detected, records of the monitoring and inspection results are not required.

(iii) When each leak is detected as specified in § 63.11495(a)(6), the following information must be recorded:

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A–7 of this chapter after it is successfully repaired or determined to be nonrepairable.

(E) “Repair delayed” and the reason for the delay if a leak is not repaired

within 15 calendar days after discovery of the leak.

(1) You may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(F) Dates of CMPU shutdowns that occur while the equipment is unrepaired.

(iv) For each pressure relief device subject to the provisions in § 63.165(e), you must keep the records specified in paragraphs (c)(9)(iv)(A) through (C) of this section.

(A) Records of the prevention measures implemented as required in § 63.165(e)(3)(ii).

(B) Records of the number of releases during each calendar year.

(C) For each release to the atmosphere, you must keep the records specified in paragraphs (c)(9)(iv)(C)(1) through (4) of this section.

(1) The start and end time and date of each pressure release to the atmosphere.

(2) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.

(3) Records of the root cause analysis and corrective action analysis conducted as required in § 63.165(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under § 63.165(e)(7)(i).

(4) For any corrective action analysis for which implementation of corrective actions are required in § 63.165(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(v) If you own or operate a batch product process and elect to pressure test the batch product process equipment train to demonstrate compliance with § 63.11495(a)(6), you are exempt from the requirements of paragraphs (c)(9)(i) through (iv) of this section. Instead, you must maintain records of the following information:

(A) A list of identification numbers for equipment in a batch product process.

(B) The dates of each pressure test required in § 63.178(b), the test pressure, and the pressure drop observed during the test.

(C) When a batch product process equipment train does not pass two consecutive pressure tests, the following information must be recorded:

(1) The date of each pressure test and the date of each leak repair attempt.

(2) Repair methods applied in each attempt to repair the leak.

(3) The reason for the delay of repair.

(4) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment.

(5) The date of successful repair.

(vi) You must maintain records of the information specified in paragraphs (c)(9)(vi)(A) through (C) of this section for closed vent systems and control devices subject to the provisions of § 63.172. The records specified in paragraph (c)(9)(vi)(A) of this section must be retained for the life of the equipment.

(A) The design specifications and performance demonstrations specified in paragraphs (c)(9)(vi)(A)(1) through (4) of this section.

(1) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by subpart SS of this part.

(4) A description of the parameter or parameters monitored, as required in § 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(B) Records of operation of closed vent systems and control devices, as specified in paragraphs (c)(9)(vi)(B)(1) through (3) of this section.

(1) Dates and durations when the closed vent systems and control devices required in § 63.11495(a)(6) are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(2) Dates and durations during which the monitoring system or monitoring device is inoperative.

(3) Dates and durations of startups and shutdowns of control devices required in § 63.11495(a)(6).

(C) Records of inspections of closed vent systems subject to the provisions of § 63.172, as specified in paragraphs (c)(9)(vi)(C)(1) and (2) of this section.

(1) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (2) during which leaks were detected, the information specified in paragraph (c)(9)(iii) of this section must be recorded.

(2) For each flow event from a bypass line subject to the requirements in § 63.172(j), you must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in § 63.11495(a)(6), you must include an estimate of the volume of gas, the concentration of organic HAP in the gas, and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(vii) If you choose to comply with the requirements of § 63.179, you must maintain the following records:

(A) Identification of the CMPU(s) and the organic HAPs they handle.

(B) A schematic of the CMPU, enclosure, and closed vent system.

(C) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

(10) For each flow event from a bypass line subject to the requirements in § 63.11495(e), you must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in §§ 63.11495 through 63.11499, you must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(11) If you are subject to the requirements specified in item 1.c of table 8 to this subpart (for heat exchange systems with a cooling water flow rate greater than or equal to 8,000 gal/min), then you must keep records as specified in § 63.104(f)(3) instead of the heat exchange system records specified in paragraphs (c)(1)(ii) and (6) of this section.

(d) *Semiannual compliance reports.* You must submit semiannual compliance reports that contain the information specified in paragraphs

(d)(1) through (12) of this section, as applicable. All reports must contain the company name and address (including county), as well as the beginning and ending dates of the reporting period. For periods where no events described by paragraphs (d)(1) through (12) of this section occur, a statement must be included in the report pursuant to § 63.10(e)(3)(v). Beginning on April 1, 2029, or once the report template for this subpart has been available on the CEDRI website for one year, whichever date is later, submit all subsequent reports using the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart and following the procedure specified in § 63.9(k). The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated State agency or other authority has approved a different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(1) *Deviations.* Before April 1, 2029 you must clearly identify any deviation from the requirements of this subpart. Beginning on April 1, 2029, for each deviation, you must report the start date, start time, duration in hours, cause, a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, actions taken to minimize emissions, and any corrective action taken to return the affected unit to its normal or usual manner of operation.

(2) *Delay of repair for a large heat exchange system.* Except as specified in paragraph (d)(11) of this section, you must include the information specified in § 63.104(f)(2) each time you invoke the delay of repair provisions for a heat exchange system with a cooling water flow rate equal to or greater than 8,000 gal/min.

(3) *Delay of leak repair.* You must provide the following information for each delay of leak repair beyond 15 days for any process equipment, storage tank, surge control vessel, bottoms receiver, and each delay of leak repair beyond 45 days for any heat exchange system with a cooling water flow rate less than 8,000 gal/min: information on the date the leak was identified, the reason for the delay in repair, and the date the leak was repaired.

(4) *Process change.* You must report each process change that affects a compliance determination and submit a new certification of compliance with the

applicable requirements in accordance with the procedures specified in paragraph (b) of this section.

(5) *Data for the alternative standard.* If you comply with the alternative standard, as specified in table 2 or 3 to this subpart, report the information required in § 63.1258(b)(5).

(6) *Overlapping rule requirements.* Report any changes in the overlapping provisions with which you comply.

(7) *Reactive and resinous materials.* Report any transfer of liquids that are reactive or resinous materials, as defined in § 63.11502(b), and not included in the NOCS.

(8) *Malfunctions.* If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. The report must also include a description of actions you took during a malfunction of an affected source to minimize emissions in accordance with § 63.11495(d), including actions taken to correct a malfunction. On and after April 1, 2029, malfunctions are reported as deviations under paragraph (d)(1) of this section and this paragraph (d)(8) no longer applies.

(9) *Equipment leaks.* For each CMPU complying with the provisions of § 63.11495(a)(6), report the information listed in paragraphs (d)(9)(i) through (vi) of this section.

(i) The number of components for which leaks were detected, the total number of components monitored, and the number of components for which leaks were not repaired, identifying the number of those that are determined nonrepairable, and totaled by component type.

(ii) The facts that explain any delay of repairs and, where appropriate, why a CMPU shutdown was technically infeasible.

(iii) For pressure relief devices subject to the requirements in § 63.11495(a)(6)(iv) include the information specified in paragraphs (d)(9)(iii)(A) through (C) of this section.

(A) For pressure relief devices in organic HAP gas or vapor service, pursuant to § 63.165(e)(1), report the instrument readings and dates for all readings of 500 ppm or greater.

(B) For pressure relief devices in organic HAP gas or vapor service, pursuant to § 63.165(e)(2), report the

instrument readings and dates of instrument reading conducted.

(C) For pressure relief devices in organic HAP service subject to § 63.165(e)(3), report each pressure release to the atmosphere, including pressure relief device identification name or number, the start date, start time, and duration (in minutes) of the pressure release; an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(iv) For bypass lines subject to the requirements in § 63.172(j) as specified in § 63.11495(a)(6)(ix), include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(v) If applicable, the compliance option selected under § 63.172(n) as specified in § 63.11495(a)(6)(ix).

(vi) If you elect to meet the requirements in § 63.178(b) as specified in § 63.11495(a)(6)(xi), include the information listed in paragraphs (d)(9)(vi)(A) through (E) of this section.

(A) Batch product process equipment train identification;

(B) The number of pressure tests conducted;

(C) The number of pressure tests where the equipment train failed the pressure test;

(D) The facts that explain any delay of repairs; and

(E) The results of all monitoring to determine compliance with § 63.172(f).

(10) *Bypass lines.* For bypass lines subject to the requirements § 63.11495(e), report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in ppmv and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(11) *Heat exchange systems.* If you are subject to the requirements specified in item 1.c of table 8 to this subpart (for heat exchange systems with a cooling water flow rate greater than or equal to

8,000 gal/min), then you must submit the information specified in § 63.104(f)(2)(vi) instead of the heat exchange system information specified in paragraphs (d)(2) and (3) of this section.

(12) *Pressure vessels.* If you are subject to the requirements specified in § 63.11497(e) and obtain an instrument reading greater than 500 ppmv when monitoring a pressure vessel in accordance with § 63.11497(e)(2), report an identification of the pressure vessel and a copy of the records specified in paragraph (c)(4)(vii)(B) of this section.

■ 11. Amend § 63.11502 by:

■ a. Revising paragraph (a) and paragraph (b) introductory text; and

■ b. In paragraph (b):

■ i. Removing the definition of “Affirmative defense”;

■ ii. Revising the definitions of “Continuous process vent” and “In organic HAP service”;

■ iii. Adding the definition of “Inaccessible connector” in alphabetical order; and

■ iv. Revising the definitions of “Metal HAP process vent”, “Point of determination”, “Process vessel”, “Storage tank”, and “Wastewater”.

The revisions and additions read as follows:

§ 63.11502 What definitions apply to this subpart?

(a) The following terms used in this subpart have the meaning given them in the CAA, and in subparts A, F, SS, WW, and FFFF of this part, as specified after each term:

TABLE 1 TO PARAGRAPH (a)

Term	40 CFR
Administrator	63.2
Area Source	63.2
Article	372.3
Batch operation	63.2550
Boiler	63.101
Bottoms receiver	63.2550
CAA	63.2
Closed vent system	63.981
Combustion device	63.101
Commenced	63.2
Compliance date	63.2
Continuous monitoring system	63.2
Continuous operation	63.2550
Control device	63.101
Distillation unit	63.101
Emission standard	63.2
EPA	63.2
Fill or filling	63.101
Floating roof	63.1061
Fuel gas system	63.981
Halogen atoms	63.2550
Halogenated vent stream	63.2550
Hydrogen halide and halogen HAP	63.2550
Hazardous air pollutant	63.2
Heat exchange system	63.101
Incinerator	63.101
In gas/vapor service	63.101
In heavy liquid service	63.101
In light liquid service	63.101

TABLE 1 TO PARAGRAPH (a)—
Continued

Term	40 CFR
In liquid service	63.101
Isolated intermediate	63.2550
Maintenance wastewater	63.2550
Major source	63.2
Maximum true vapor pressure	63.101
Oil-water separator or organic-water separator	63.101
Operating permit	63.101
Owner or operator	63.2
Performance test	63.2
Pressure release	63.101
Pressure relief device or valve	63.101
Pressure vessel	63.101
Process condenser	63.2550
Process heater	63.101
Process tank	63.2550
Process wastewater	63.101
Reactor	63.101
Responsible official	63.2
State	63.2
Supplemental gases	63.2550
Surge control vessel	63.2550
Test method	63.2
Unit operation	63.101

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in the CAA, or in subpart A, F, SS, WW, or FFFF of this part, and in this section, the term has the meaning given in this section for purposes of this subpart.

* * * * *

Continuous process vent means a “process vent” as defined in § 63.101 except:

(i) The reference in § 63.107(e) to a chemical manufacturing process unit that meets the criteria of § 63.100(b) means a CMPU that meets the criteria of § 63.11494(a) and (b);

(ii) The reference in § 63.107(h)(2) to subpart H means § 63.11495(a)(3) through (6) for the purposes of this subpart;

(iii) The reference in § 63.107(h)(4) to § 63.113 means tables 2 and 3 to this subpart;

(iv) The reference in § 63.107(h)(7) to § 63.119 means Table 5 to this subpart, and the reference to § 63.126 does not apply for the purposes of this subpart;

(v) The second sentence in the definition of “process vent” in § 63.101 does not apply for the purposes of this subpart;

(vi) The references to an “air oxidation reactor, distillation unit, or reactor” in § 63.107 means any continuous operation for the purposes of this subpart;

(vii) Section § 63.107(h)(8) does not apply for the purposes of this subpart; and

(viii) A separate determination is required for the emissions from each CMPU, even if emission streams from two or more CMPU are combined prior

to discharge to the atmosphere or to a control device.

(ix) On and after April 1, 2029, § 63.107(h)(9) no longer applies.

(1x) On and after April 1, 2028, § 63.107(i) no longer applies. Instead, a process vent is the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream would meet the characteristics specified in § 63.107(b) through (g), but, for purposes of avoiding applicability, has been deliberately interrupted, temporarily liquefied, routed through any item of equipment for no process purpose, or disposed of in a control device that does not meet the criteria in table 3 of this subpart.

* * * * *

In organic HAP service means, before April 1, 2029, that a process vessel or piece of equipment either contains or contacts a feedstock, byproduct, or product that contains an organic HAP, excluding any organic HAP used in manual cleaning activities. A process vessel is no longer in organic HAP service after the vessel has been emptied to the extent practicable (*i.e.*, a vessel with liquid left on process vessel walls or as bottom clingage, but not in pools, due to floor irregularity, is considered completely empty) and any cleaning has been completed. On and after April 1, 2029, *In organic HAP service*, for a process vessel, means either contains or contacts a feedstock, byproduct, or product that contains an organic HAP, excluding any organic HAP used in manual cleaning activities. A process vessel is no longer in organic HAP service after the vessel has been emptied to the extent practicable (*i.e.*, a vessel with liquid left on process vessel walls or as bottom clingage, but not in pools, due to floor irregularity, is considered completely empty) and any cleaning has been completed. On and after April 1, 2029, *In organic HAP service*, for equipment and heat exchange systems, means that a piece of equipment or heat exchange system either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAPs as determined according to the provisions of § 63.180(d). The provisions of § 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service. For purposes of the definition of “heat exchange system” in § 63.101(b), the term “equipment” in § 63.180(d) includes heat exchange systems.

* * * * *

Inaccessible connector means a connector that is:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

* * * * *

Metal HAP process vent means, before April 1, 2029, the point of discharge to the atmosphere (or inlet to a control device, if any) of a metal HAP-containing gas stream from any CMPU at an affected source containing at least 50 ppmv metal HAP. The metal HAP concentration may be determined using any of the following: process knowledge, an engineering assessment, or test data. On and after April 1, 2029, *Metal HAP process vent* means the point of discharge to the atmosphere (or inlet to a control device, if any) of a metal HAP-containing gas stream from any CMPU at an affected source containing metal HAP. The metal HAP concentration may be determined using any of the following: process knowledge, an engineering assessment, or test data.

* * * * *

Point of determination means “point of determination” as defined in § 63.101, except:

(i) The reference to table 8 or 9 compounds means table 9 to subpart G of this part or table 7 to this subpart compounds;

(ii) The reference to “as determined in § 63.144” does not apply for the purposes of this subpart; and

(iii) The point of determination is made at the point where the stream exits the CMPU. If a recovery device is used, the point of determination is after the last recovery device.

Process vessel means each vessel, except hand-held containers, used in the processing of raw materials to

chemical products. Examples include, but are not limited to centrifuges, mixing vessels, and process tanks.

* * * * *

Storage tank means a tank or other vessel that is used to store liquids that contain organic HAP and that are part of a CMPU subject to this subpart VVVVVV. The following are not considered storage tanks for the purposes of this subpart:

(i) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(ii) [Reserved]

(iii) Process tanks;

(iv) Tanks storing organic liquids containing HAP only as impurities;

(v) Surge control vessels;

(vi) Bottoms receivers; and

(vii) Wastewater storage tanks.

* * * * *

Wastewater means water that is discarded from a CMPU or control device and that contains at least 5 ppmw of any HAP listed in table 9 to subpart G of this part and has an annual average flow rate of 0.02 liters per minute. Wastewater means both process wastewater and maintenance wastewater that is discarded from a CMPU or control device. The following are not considered wastewater for the purposes of this subpart:

(i) Stormwater from segregated sewers;

(ii) Water from fire-fighting and deluge systems, including testing of such systems;

(iii) Spills;

(iv) Water from safety showers;

(v) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(vi) Equipment leaks;

(vii) Wastewater drips from procedures such as disconnecting hoses after cleaning lines; and

(viii) Noncontact cooling water.

* * * * *

■ 12. Amend § 63.11503 by revising paragraph (b) introductory text and adding paragraph (b)(5) to read as follows:

§ 63.11503 Who implements and enforces this subpart?

* * * * *

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the approval authorities contained in paragraphs (b)(1) through (5) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the state, local, or Tribal agency.

* * * * *

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

■ 13. Amend table 3 to subpart VVVVVV of part 63 by revising entry “1.

Each continuous process vent with a TRE ≤ 1.0 ” to read as follows:
* * * *

TABLE 3 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR CONTINUOUS PROCESS VENTS

* * * *

For . . .	You must . . .	Except . . .
1. Each continuous process vent with a TRE ≤ 1.0 .	a. Reduce emissions of total organic HAP by ≥ 95 percent by weight (≥ 85 percent by weight for periods of startup or shutdown) or to ≤ 20 ppmv by routing emissions through a closed vent system to any combination of control devices (except a flare) in accordance with the requirements of § 63.982(c) and the requirements referenced therein; or b. Reduce emissions of total organic HAP by routing all emissions through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of § 63.982(b) and the requirements referenced therein; or c. Comply with the alternative standard specified in § 63.2505 and the requirements referenced therein.	i. Compliance may be based on either total organic HAP or TOC; and ii. As specified in § 63.11496(g). i. Not applicable. i. As specified in § 63.11496(e).
*	*	*

■ 14. Revise table 4 to subpart VVVVVV of part 63 to read as follows:

TABLE 4 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR METAL HAP PROCESS VENTS

[As required in § 63.11496(f), you must comply with the requirements for metal HAP process vents as shown in the following table.]

For * * *	You must * * *	Except * * *
Each CMPU with total metal HAP emissions ≥ 400 lb/yr.	Reduce collective uncontrolled emissions of total metal HAP emissions by ≥ 95 percent by weight by routing emissions from a sufficient number of the metal HAP process vents through a closed vent system to any combination of control devices, according to the requirements of § 63.11496(f)(3), (4), or (5).	Not applicable.

■ 15. Amend table 5 to subpart VVVVVV of part 63 by:

■ a. Revising the entry “1. Storage tank with a design capacity $\geq 40,000$ gallons, storing liquid that contains organic HAP listed in table 1 to this subpart, and for

which the maximum true vapor pressure (MTVP) of total organic HAP at the storage temperature is ≥ 5.2 kPa and < 76.6 kPa.”; and

■ b. Adding the entry “5. Pressure vessel with a design capacity greater

than or equal to 20,000 gallons” in numerical order.

The revision and addition read as follows:

* * * *

TABLE 5 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR STORAGE TANKS

* * * *

For each * * *	You must * * *	Except * * *
1. Storage tank with a design capacity $\geq 40,000$ gallons, storing liquid that contains organic HAP listed in table 1 to this subpart, and for which the maximum true vapor pressure (MTVP) of total organic HAP at the storage temperature is ≥ 5.2 kPa and < 76.6 kPa.	a. Comply with the requirements of subpart WW of this part; b. Reduce total organic HAP emissions by ≥ 95 percent by weight by operating and maintaining a closed-vent system and control device (other than a flare) in accordance with § 63.982(c); or	i. All required seals must be installed by the compliance date in § 63.11494. i. Compliance may be based on either total organic HAP or TOC; ii. When the term storage vessel is used in subpart SS of this part, the term storage tank, surge control vessel, or bottoms receiver, as defined in § 63.11502 of this subpart, applies; and iii. The requirements do not apply during periods of planned routine maintenance of the control device, as specified in § 63.11497(b).

TABLE 5 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR STORAGE TANKS—Continued

* * * * *

For each * * *	You must * * *	Except * * *
	c. Reduce total HAP emissions by operating and maintaining a closed-vent system and a flare in accordance with § 63.982(b); or d. Vapor balance in accordance with § 63.2470(e); or e. Route emissions to a fuel gas system or process in accordance with the requirements in § 63.982(d) and the requirements referenced therein	i. The requirements do not apply during periods of planned routine maintenance of the flare, as specified in § 63.11497(b); and ii. When the term storage vessel is used in subpart SS of this part, it means storage tank, surge control vessel, or bottoms receiver, as defined in § 63.11502 of this subpart. i. To comply with § 63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with § 63.11494 through § 63.11502 instead of complying with § 63.1253(f)(7)(ii), except as specified in item 1.d.ii and 1.d.iii of this table. ii. The reporting requirements in § 63.11501 do not apply to the owner or operator of the off-site cleaning or reloading facility. iii. As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in §§ 63.11494 through 63.11502, the owner or operator of an offsite cleaning or reloading facility may comply as specified in § 63.11500 with any other subpart of this part which has monitoring, recordkeeping, and reporting provisions as specified in § 63.11500. i. When the term storage vessel is used in subpart SS of this part, it means storage tank, surge control vessel, or bottoms receiver, as defined in § 63.11502.
* * *	* * *	* * *
5. Pressure vessel with a design capacity greater than or equal to 20,000 gallons.	a. Beginning no later than the compliance dates specified in § 63.11494(i), comply with the requirements specified in § 63.11497(e).	

■ 16. Revise table 8 to subpart VVVVVV of part 63 to read as follows:

TABLE 8 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR HEAT EXCHANGE SYSTEMS

[As required in § 63.11499, you must comply with the requirements for heat exchange systems as shown in the following table.]

For . . .	You must . . .	Except . . .
1. Each heat exchange system with a cooling water flow rate $\geq$ 8,000 gal/min and not meeting one or more of the conditions in § 63.104(a)(1) through (4).	a. Except as specified in item 1.c of this table, comply with the monitoring requirements in § 63.104(c), the leak repair requirements in § 63.104(d) and (e), and the recordkeeping and reporting requirements in § 63.104(f); or b. Except as specified in item 1.c of this table, comply with the heat exchange system requirements in § 63.104(b) and the requirements referenced therein	i. The reference to monthly monitoring for the first 6 months in § 63.104(b)(1) and (c)(1)(iii) does not apply. Monitoring shall be no less frequent than quarterly; ii. The reference in § 63.104(f)(1) to record retention requirements in § 63.103(c)(1) does not apply. Records must be retained as specified in §§ 63.10(b)(1) and 63.11501(c); and iii. The reference in § 63.104(f)(2) to “the next semi-annual periodic report required by § 63.152(c)” means the next semiannual compliance report required by § 63.11501(d). i. Not applicable.

TABLE 8 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR HEAT EXCHANGE SYSTEMS—Continued

[As required in § 63.11499, you must comply with the requirements for heat exchange systems as shown in the following table.]

For . . .	You must . . .	Except . . .
	c. Beginning no later than the compliance dates specified in § 63.11494(i), the exemption conditions specified in § 63.104(a)(3) and (4), and items 1.a and 1.b of this table no longer apply. Instead, comply with the requirements in § 63.104(f) through (j) and (l).	i. As specified in § 63.11499(d).

■ 17. Revise table 9 to subpart VVVVVV of part 63 to read as follows:

TABLE 9 TO SUBPART VVVVVV OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART VVVVVV

[As required in § 63.11501(a), you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.]

Citation	Subject	Applies to this subpart?	Explanation
63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)–(a)(12) (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e).	Applicability	Yes.	
63.1(a)(5), (a)(7)–(a)(9), (b)(2), (c)(3), (c)(4), (d).	Reserved	No.	
63.2	Definitions	Yes.	
63.3	Units and Abbreviations	Yes.	
63.4	Prohibited Activities and Circumvention	Yes.	
63.5	Preconstruction Review and Notification Requirements.	Yes.	
63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1)(iii), (g), (i), (j).	Compliance with Standards and Maintenance Requirements.	Yes.	
63.6(b)(6), (c)(3), (c)(4), (d), (e)(2)	Reserved	No.	
63.6(e)(1)(i) and (ii), (e)(3), and (f)(1)	SSM Requirements	No	See § 63.11495(d) for general duty requirement. The standards in this subpart apply at all times.
63.6(f)	Compliance with Nonopacity Emission Standards.	Yes.	
63.6(h)	Compliance with Opacity and Visible Emission Standards.	No	This subpart does not include opacity or visible emissions (VE) standards or require a continuous opacity monitoring system (COMS).
63.7(a)(1), (a)(3), (a)(4), (c), (e)(4), and (f)–(h).	Performance Testing Requirements	Yes	Except this subpart specifies how and when the performance test results are reported.
63.7(a)(2), (b), (d), (e)(2)–(e)(3)	Performance Testing Schedule, Notification of Performance Test, Performance Testing Facilities, and Conduct of Performance Tests.	Yes/No	Requirements apply if conducting test for metal HAP control; requirements in §§ 63.997(c)(1), (d), (e), and 63.999(a)(1) apply, as referenced in § 63.11496(g), if conducting test for organic HAP or hydrogen halide and halogen HAP control device.
63.7(e)(1)	Performance Testing	No	See § 63.11496(f)(3)(ii) if conducting a test for metal HAP emissions. See §§ 63.11496(g) and 63.997(e)(1) if conducting a test for continuous process vents or for hydrogen halide and halogen emissions. See §§ 63.11496(g) and 63.2460(c) if conducting a test for batch process vents.
63.8(a)(1), (b), (c)(1)(ii), (c)(2)–(c)(3), (f)(1)–(5).	Monitoring Requirements	Yes.	
63.8(a)(2)	Monitoring Requirements	No.	
63.8(a)(3)	Reserved	No.	
63.8(a)(4)	Monitoring Requirements	Yes.	
63.8(c)(1)(i)	General Duty to Minimize Emissions and CMS Operation.	No.	
63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS.	No.	

TABLE 9 TO SUBPART VVVVVV OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART VVVVVV—
Continued

[As required in § 63.11501(a), you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.]

Citation	Subject	Applies to this subpart?	Explanation
63.8(c)(4) .....	.....	Yes	Only for CEMS. CPMS requirements in subpart SS of this part are referenced from § 63.11496. Requirements for COMS do not apply because this subpart does not require COMS.
63.8(c)(5) .....	.....	No	This subpart does not require COMS.
63.8(c)(6)–(c)(8), (d)(1)–(d)(2), (e), (f)(6) .....	.....	Yes	Requirements apply only if you use a continuous emission monitoring system (CEMS) to demonstrate compliance with the alternative standard in § 63.11496(e). Additionally, this subpart specifies how and when the performance evaluation results are reported.
63.8(d)(3)	Written Procedures for CMS	Yes	Requirement applies except for last sentence, which refers to an SSM plan. SSM plans are not required.
63.8(g)(1)–(g)(4) .....	.....	Yes	Data reduction requirements apply only if you use CEMS to demonstrate compliance with alternative standard in § 63.11496(e). COMS requirements do not apply. Requirement in § 63.8(g)(2) does not apply because data reduction for CEMS are specified in subpart FFFF of this part.
63.8(g)(5) .....	.....	No	Data reduction requirements for CEMS are specified in § 63.2450(j)(4), as referenced from § 63.11496. CPMS requirements are specified in subpart SS of this part, as referenced from § 63.11496.
63.9(a), (b)(1), (b)(2), (b)(4), (b)(5), (c), (d), (e), (i).	Notification Requirements	Yes.	
63.9(b)(3), (h)(4)	Reserved	No.	
63.9(f) .....	.....	No	This subpart does not contain opacity or VE limits.
63.9(g) .....	.....	Yes	Additional notification requirement applies only if you use CEMS to demonstrate compliance with alternative standard in § 63.11496(e).
63.9(h)(1)–(h)(3), (h)(5)–(h)(6) .....	.....	Yes	Except as specified in § 63.11501(b) and this subpart does not contain opacity or VE limits.
63.9(j)	Change in Information Already Provided	No	Notification of process changes that affect a compliance determination are required in § 63.11501(d)(4).
63.9(k)	Electronic Submission of Notifications or Reports.	Yes	As specified in §§ 63.11496(g)(1)(iv), 63.11497(f)(1)(iv), and 63.11501(b) and (d).
63.10(a)	Recordkeeping Requirements	Yes.	
63.10(b)(1) .....	.....	Yes.	
63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns.	No	See § 63.11501(c)(8) for recordkeeping of occurrence and duration of each startup and shutdown for continuous process vents that are subpart to table 3 to this subpart.
63.10(b)(2)(ii)	Recordkeeping of Malfunctions	No	See § 63.11501(c)(1)(vii) and (viii) for recordkeeping requirements.
63.10(b)(2)(iii)	Maintenance Records	Yes.	
63.10(b)(2)(iv) and (v)	Actions Taken to Minimize Emissions During SSM.	No.	
63.10(b)(2)(vi), (x), (xi), (xiii) .....	.....	Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in § 63.11496(e).
63.10(b)(2)(vii)–(b)(2)(ix), (b)(2)(xii), (b)(2)(xiv). .....	.....	Yes.	
63.10(b)(3) .....	.....	Yes.	

TABLE 9 TO SUBPART VVVVVV OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART VVVVVV—
Continued

[As required in § 63.11501(a), you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.]

Citation	Subject	Applies to this subpart?	Explanation
63.10(c)(1), (c)(5)–(c)(6), (c)(13)–(c)(14)	.....	Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in § 63.11496(e).
63.10(c)(7)–(8)	Additional Recordkeeping Requirements for CMS—Identifying Exceedances and Excess Emissions.	Yes.	
63.10(c)(10)	Recordkeeping Nature and Cause of Malfunctions.	No	See § 63.11501(c)(1)(vii) and (viii) for recordkeeping requirements.
63.10(c)(11)	Recording Corrective Actions	No	See § 63.11501(c)(1)(vii) and (viii) for recordkeeping requirements.
63.10(c)(12) .....	.....	Yes.	See §§ 63.11496(g)(1)(iv) and 63.11497(f)(1)(iv) for performance test reporting.
63.10(c)(15)	Use of SSM Plan	No.	
63.10(c)(2)–(c)(4), (c)(9)	Reserved	No.	This subpart does not include opacity or VE limits.
63.10(d)(1), (d)(4), (f)	Reporting Requirements	Yes.	
63.10(d)(2) .....	.....	No	See §§ 63.11496(g)(1)(iv) and 63.11497(f)(1)(iv) for performance test reporting.
63.10(d)(3) .....	.....	No	This subpart does not include opacity or VE limits.
63.10(d)(5)	SSM Reports	No	See § 63.11501(d)(1) and (8) for reporting requirements.
63.10(e)(1)–(e)(2) .....	.....	Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in § 63.11496(e). Additionally, this subpart specifies how and when the performance evaluation results are reported.
63.10(e)(3) .....	.....	No	Except as provided in § 63.11501(d).
63.10(e)(4) .....	.....	No	This subpart does not include opacity or VE limits.
63.11	Control Device Requirements	Yes.	This subpart does not include opacity or VE limits.
63.12	State Authorities and Delegations	Yes.	
63.13	Addresses	Yes.	
63.14	Incorporations by Reference	Yes.	
63.15	Availability of Information and Confidentiality.	Yes.	
63.16	Performance Track Provisions	Yes.	

Second Implementation Period” after the entry for “Regional Haze Five-Year Progress Report”.

The additions read as follows:

§ 52.1870 Identification of plan.

* * * * *

(d) * * *

EPA-APPROVED OHIO SOURCE-SPECIFIC PROVISIONS

Name of source	Number	Ohio effective date	EPA approval date	Comments
* * *	* * *	* * *	* * *	* * *
Cardinal Power Plant	DFFO	7/26/2024	7/8/2025, 90 FR [insert Federal Register page where the document begins].	Regional haze emission limit.
* * *	* * *	* * *	* * *	* * *
General James M. Gavin Power Plant	DFFO	7/26/2024	7/8/2025, 90 FR [insert Federal Register page where the document begins].	Regional haze emission limit.
* * *	* * *	* * *	* * *	* * *
Ohio Valley Electric Corp.—Kyger Creek Station.	DFFO	7/26/2024	7/8/2025, 90 FR [insert Federal Register page where the document begins].	Regional haze emission limits.
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EPA-APPROVED OHIO NONREGULATORY AND QUASI-REGULATORY PROVISIONS

Title	Applicable geographic or nonattainment area	State date	EPA approval	Comments
* * *	* * *	* * *	* * *	* * *
Visibility Protection				
* * *	* * *	* * *	* * *	* * *
Regional Haze Plan for the Second Implementation Period.	Statewide	7/30/2021, 8/6/2024, and 6/16/2025.	7/8/2025, 90 FR [insert Federal Register page where the document begins].	Full Approval.

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[FR Doc. 2025–12526 Filed 7–7–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2002–0085, EPA–HQ–OAR–2003–0051; FRL–8471.1–03–OAR]

National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Residual Risk and Technology Review, and Periodic Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule; request for comment.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is taking interim final action on revisions to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Coke Oven Batteries (COB) source category and the Coke Ovens: Pushing, Quenching, and Battery Stacks (PQBS) source category by revising certain compliance deadlines for standards finalized in 2024. Specifically, the EPA is amending the compliance deadlines for certain 2024 revisions to the COB and PQBS NESHAPs from July 7, 2025 and January 6, 2026, to July 5, 2027. The EPA seeks comment on this final action and will respond to comments received and revise this final action as appropriate.

DATES: This interim final rule is effective on July 8, 2025. Comments on this rule must be received on or before August 7, 2025.

ADDRESSES: You may send comments, identified by Docket ID Nos. EPA–HQ–OAR–2002–0085 (Coke Ovens: Pushing, Quenching, and Battery Stacks source category) and EPA–HQ–OAR–2003–0051 (Coke Oven Batteries source category) by any of the following methods:

- **Federal eRulemaking Portal:** <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.
- **Email:** a-and-r-docket@epa.gov. Include Docket ID Nos. EPA–HQ–OAR–2002–0085 or EPA–HQ–OAR–2003–0051 in the subject line of the message.
- **Fax:** (202) 566–9744. Attention Docket ID Nos. EPA–HQ–OAR–2002–0085 or EPA–HQ–OAR–2003–0051.

• *Mail*: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID Nos. EPA-HQ-OAR-2002-0085 or EPA-HQ-OAR-2003-0051, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

• *Hand/Courier Delivery*: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday (except Federal holidays).

Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments, see the "Public Participation" heading of the General Information section of this preamble.

FOR FURTHER INFORMATION CONTACT: U.S. EPA, Attn: Jonathan Witt, Mail Drop: D243-04, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5645; email address: witt.jon@epa.gov.

Preamble acronyms and abbreviations. Throughout this document the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AG acid gases
 APA Administrative Procedure Act
 B/W bypass/waste heat
 CAA Clean Air Act
 CBI Confidential Business Information
 CFR Code of Federal Regulations
 COB coke oven batteries
 COETF Coke Oven Environmental Task Force
 CRA Congressional Review Act
 D/F dioxins and furans
 EIA economic impact analysis
 EPA Environmental Protection Agency
 FR Federal Register
 HAP hazardous air pollutant(s)
 HBEL health-based emission limit
 HCl hydrochloric acid
 HCN hydrogen cyanide
 HF hydrogen fluoride
 HNR heat and nonrecovery (*i.e.*, no chemical recovery), or nonrecovery with no heat recovery
 HRSG heat recovery steam generator
 MACT maximum achievable control technology
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OAQPS Office of Air Quality Planning and Standards
 OMB Office of Management and Budget
 PAH polycyclic aromatic hydrocarbons

PM particulate matter
 PRA Paperwork Reduction Act
 PQBS pushing, quenching, and battery stacks
 RFA Regulatory Flexibility Act
 Rtc response to comments
 RTR risk and technology review
 tpy tons per year
 UMRA Unfunded Mandates Reform Act
 VOHAP volatile organic HAP

Organization of this preamble. The information in this preamble is organized as follows:

- I. General Information
 - A. Public Participation
 - B. Potentially Affected Entities
 - C. Statutory Authority
 - D. Judicial Review and Administrative Review
- II. Regulatory Revisions
 - A. COB and PQBS NESHAPs Background and Summary
 - B. Petitions for Reconsideration
 - C. Compliance Challenges
 - D. Specific Regulatory Revisions
- III. Rulemaking Procedures
- IV. Request for Comment
- V. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
 - B. Executive Order 14192: Unleashing Prosperity Through Deregulation
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 - D. Regulatory Flexibility Act (RFA)
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 - I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - J. National Technology Transfer and Advancement Act (NTTAA)
 - K. Congressional Review Act (CRA)

SUPPLEMENTARY INFORMATION:

I. General Information

A. Public Participation

Submit your written comments, identified by Docket ID Nos. EPA-HQ-OAR-2002-0085 or EPA-HQ-OAR-2003-0051, at <https://www.regulations.gov> (our preferred method), or by the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit to the EPA's docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. This type of

information should be submitted as discussed in the *Submitting CBI* section of this preamble. Multimedia submissions (audio, video, *etc.*) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). Please visit <https://www.epa.gov/dockets/commenting-epa-dockets> for additional submission methods; the full EPA public comment policy; information about CBI or multimedia submissions; and general guidance on making effective comments.

Submitting CBI. Do not submit information containing CBI to the EPA through <https://www.regulations.gov>. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, note the docket ID, mark the outside of the digital storage media as CBI, and identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in the *Public Participation* section of this preamble. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI and note the docket ID. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2.

Our preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services (*e.g.*, Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the Office of Air Quality Planning and Standards (OAQPS) CBI Office at the email address oaqpscbi@epa.gov and, as described above, should include clear CBI markings and note the docket ID. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov

to request a file transfer link. If sending CBI information through the U.S. Postal Service, please send it to the following address: U.S. EPA, Attn: OAQPS Document Control Officer, Mail Drop: C404-02, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Docket ID Nos. EPA-HQ-OAR-2002-0085 or EPA-HQ-OAR-2003-0051. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

B. Potentially Affected Entities

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (see EPA-450/3-91-030, July 1992), the Coke Oven Batteries (COB) source category includes emissions from the batteries themselves. The Pushing, Quenching, and Battery Stacks (PQBS) source category includes emissions from pushing and quenching operations, and from battery stacks at a coke oven facility. A coke oven facility is defined as a facility engaged in the manufacturing of metallurgical coke by the destructive distillation of coal. The 2022 North American Industry Classification System (NAICS) code for the COB source category (40 CFR part 63, subpart L) is 324199 for “All Other Petroleum and Coal Products Manufacturing,” and for the PQBS source category (40 CFR part 63, subpart CCCC) is 331110 for “Iron and Steel Mills and Ferroalloy Manufacturing.” The information provided in this section is not intended to be exhaustive but rather provides a guide for readers regarding the entities that this action is likely to affect. The revised compliance dates are directly applicable to the affected sources. Federal, State, local, and Tribal government entities will not be affected by this interim final action. Based on the information we have, there are 11 operating coke manufacturing facilities subject to these national emission standards for hazardous air pollutants (NESHAP). If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

C. Statutory Authority

Statutory authority to issue the amendments finalized in this action is provided by the same Clean Air Act (CAA) provisions that provided authority to issue the regulations that set the compliance deadlines being

amended in this action: CAA section 112, as amended (42 U.S.C. 7412). Statutory authority for the rulemaking procedures followed in this action is provided by Administrative Procedure Act (APA) section 553(b)(B), 5 U.S.C. 553(b)(B) (good cause exception to notice-and-comment rulemaking).

D. Judicial Review and Administrative Review

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by September 8, 2025. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

II. Regulatory Revisions

A. COB and PQBS NESHAPs Background and Summary

The COB NESHAP (40 CFR part 63, subpart L), promulgated on October 27, 1993, established standards for emissions from doors, lids, and offtakes at heat and/or nonrecovery (HNR) facilities and any new coke production process with by-product chemical recovery facilities. The PQBS NESHAP (40 CFR part 63, subpart CCCC), promulgated on April 14, 2003, established emissions standards for pushing coke out of ovens, quenching hot coke, and battery stacks of oven combustion. The risk and technology review (RTR) for the 1993 COB NESHAP was completed on April 5, 2005. In the most recent action, finalized July 5, 2024, the EPA completed a periodic technology review for the COB NESHAP, and an RTR for the PQBS NESHAP, that resulted in amendments to these rules (89 FR 55684) (the “Coke Ovens rule”), which included: (1) maximum achievable control technology (MACT) standards to address previously unregulated emissions of hazardous air pollutants (HAP) from the PQBS source category pursuant to our interpretation of *Louisiana Environmental Action Network v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020) (“LEAN”); and (2) revised emissions standards based on new information regarding developments in practices, processes, and control technologies pursuant to CAA section 112(d)(6).

Relevant to this action, the Coke Ovens rule finalized the following standards in the COB source category pursuant to CAA section 112(d)(6): (1) fenceline monitoring requirements; (2)

revised leak standards for doors, lids, and offtakes; and (3) revised pressure monitoring requirements for oven doors at HNR facilities. In addition, the Coke Ovens rule finalized the following standards to address previously unregulated HAP in the PQBS source category: (1) four new emission standards based on MACT for pushing operations: acid gases (AG),¹ hydrogen cyanide (HCN), mercury (Hg), and polycyclic aromatic hydrocarbons (PAH) (which is also a surrogate for dioxins and furans (D/F), formaldehyde, and volatile organic HAP (VOHAP)); (2) four new emission standards based on MACT for battery stacks: AG, HCN, Hg, and particulate matter (PM) (as a surrogate for non-Hg HAP metals); (3) four new emission standards based on MACT for HNR heat recovery steam generator (HRSG) main stacks: AG, Hg, PAH (which is also a surrogate for formaldehyde), and PM (as a surrogate for non-Hg HAP metals); (4) five new emission standards based on MACT for HNR bypass/waste heat (B/W) stacks: AG, formaldehyde (which is also a surrogate for VOHAP), Hg, PAH, and PM (as a surrogate for non-Hg HAP metals); and (5) a new MACT standard, in the form of a good combustion practices work practice standard, for PAH, D/F, and VOHAP emitted from battery stacks. Finally, pursuant to CAA section 112(d)(6), the Coke Ovens rule finalized opacity limits on HNR B/W stacks for the PQBS source category.

B. Petitions for Reconsideration

Following the issuance of the Coke Ovens rule, the American Coke and Coal Chemicals Institute (and the Coke Oven Environmental Task Force (COETF) that it manages), SunCoke Energy, and the United States Steel Corporation submitted petitions for reconsideration on September 3, 2024, detailing alleged errors, requesting corrections, and expressing concerns regarding the technical feasibility of certain new requirements and the timing of compliance.

On March 20, 2025, the EPA responded to the petitions for reconsideration, granting discretionary reconsideration on the following issues (the applicable NESHAP is listed in parentheses):

- Fenceline monitoring (COB NESHAP)
- MACT standards (PQBS NESHAP)
- Revised leak limits for doors, lids, and offtakes (COB NESHAP)

¹ Acid gases include hydrochloric acid (HCl) and hydrogen fluoride (HF).

- Achieving zero leaks from HNR oven doors (COB NESHP)²
- Opacity limits on HNR B/W stacks (PQBS NESHP)

1. Fenceline Monitoring

For fenceline monitoring, the EPA has identified two issues that warrant reconsideration:

- First, the COETF commented that the EPA should be using the actual fenceline boundary when setting the action level (instead of using the polar grid approach). In the final rule, according to the commenter, the EPA used receptors at the fenceline boundary to set the action level but did not include the receptor with the highest modeled benzene concentration. The EPA agrees that this had the potential to yield a lower action level than necessary and is thus granting reconsideration to reevaluate.

- Second, in the final rule, the EPA required that facilities must employ “appropriate real-time sampling techniques” (1) in their site-specific monitoring plans if they plan to account for proximate onsite sources of benzene emissions, and (2) to locate the cause of an action level exceedance if a root cause determination has not been made within 30 days. In their petition for reconsideration, the COETF argued that real-time monitors are not widely used in the cokemaking industry. They also argued that the Coke Ovens rule did not address multiple issues with real-time monitors, including the technical feasibility of locating and installing real-time monitors, the difficulty of using real-time benzene monitor data and the two-week average benzene monitor data at the fenceline to determine an appropriate delta c (the lowest concentration subtracted from the highest concentration), the complexity of using these monitors at coke facilities, and the cost of installing and operating monitors. The EPA agrees that evaluating these issues is necessary to assess whether the standards as finalized are feasible for sources to comply with and is thus granting reconsideration on appropriate real-time sampling techniques.

2. PQBS MACT Standards

For the MACT standards in the PQBS NESHP, the EPA has identified three issues that warrant reconsideration.

² Specifically, the EPA is reconsidering the requirement to both (1) achieve zero percent leaking oven doors as determined by EPA Method 303A; and (2) conduct pressure monitoring to ensure that the ovens are operated under a negative pressure. In the letter granting reconsideration, the EPA incorrectly labeled this issue as pertaining to the PQBS NESHP, when it actually applies to the COB NESHP.

First, petitioners indicated that there were several issues related to limited data. After the comment period, which closed on October 2, 2023, the COETF submitted the following documents to the EPA that provided additional information on the limited data issue:

- December 29, 2023, white paper from the COETF titled “Coke Ovens RTR Proposed Rule: White Paper on Proposed Standards” (hereafter referred to as the “Variability White Paper”);³
- April 2, 2024, white paper from Trinity Consultants (at the request of the COETF) titled “Intra-Mine Variability Factor for Mercury in Metallurgical Coals” (hereafter referred to as the “Trinity IMV Hg White Paper”);⁴ and
- May 3, 2024, white paper from Trinity Consultants (at the request of the COETF) titled “Upper Prediction Limit Calculations with Intra-Mine Variability Factor” (hereafter referred to as the “Trinity UPL IMV White Paper”).⁵

These white papers discussed the concept of intra-mine variability factors, which would account for the natural variability of mercury, fluorine, and chlorine within metallurgical coal when determining the MACT standards. The papers indicate that the amount of mercury within the coal has a direct impact on the amount of mercury emissions, and the amounts of fluorine and chlorine within the coal have direct impacts on the amounts of HF and HCl emissions, respectively. The COETF noted that similar “intra-quarry variability” factors had been applied by the EPA in other manufacturing industries (e.g., Portland cement, lime, and brick and structural clay products).

Second, in a March 22, 2024, email, the COETF requested that: (1) HCl be used as a surrogate for HF; and (2) a health-based emission limit (HBEL) be established for HCl (in lieu of a harder-to-meet MACT floor limit). The COETF asserted that HCl is a more appropriate surrogate for of the same reasons articulated in the final rule for the Integrated Iron and Steel source category, where the EPA stated that the “numerical standard for HCl being finalized in this rule shall act as a work practice (or surrogate) for HF, as control of HCl will also control HF” (89 FR 23310, October 9, 2024). The COETF also asserted that an HBEL is the most appropriate standard for HCl for the same reasons articulated in the EPA’s supplemental notice of proposed

rulemaking for the Lime Manufacturing source category, where the EPA proposed a mass-based HBEL for HCl in lieu of a technology-based limit (89 FR 9088, February 9, 2024). The EPA is reconsidering because the use of HCl as a surrogate for HF, as well as an HBEL for HCl, is potentially more appropriate than the AG MACT standards that were promulgated in the Coke Ovens rule.

Finally, the COETF stated in its petition for reconsideration that the EPA used a normal distribution for calculating the HCN limit for pushing emissions in the Coke Ovens rule when a lognormal distribution should have been used and that the use of the lognormal distribution would have raised the limit by a factor of three. Because of the potential magnitude of difference, the EPA is reconsidering the rule to reevaluate its calculations.

3. Leak Limits for Doors, Lids, and Offtakes

For leak limits for doors, lids, and offtakes, the EPA has identified two issues that warrant reconsideration:

- In their petition for reconsideration, the COETF pointed to text of the Coke Ovens rule where the EPA stated that it can “infer” from compliance data showing fewer leaking doors, lids, and offtakes that there are “improved work practices for observing leaks during operations, and more quickly and efficiently sealing and adjusting doors, or other practices related to door leaks.” The COETF asserts that: (1) there have been no changes or identified improvements in the leak control practices used in the industry; (2) the same leak control practices used by facilities today were in use and considered during development of the original MACT standards; and (3) there are no different or specialized work practices conducted at the one “large” coke plant that are not practiced at other coke plants. The EPA is reconsidering this aspect of the rule to evaluate these claims.

- The COETF also argued that the EPA improperly selected a 3 million tons per year (tpy) production capacity threshold to create a subcategory of one facility because there is only one such coke facility that exceeds 3 million tpy coke production, and no different or improved work practices exist that are unique to this facility. The COETF informed the EPA that the one “large” facility employs the same leak control practices used by the rest of the industry and commented that higher coke production capacity does not lead to lower leak rates. The EPA agrees that, if true, this information would impact the

³ See Docket ID Nos. EPA-HQ-OAR-2002-0085-1516 and EPA-HQ-OAR-2003-0051-1884.

⁴ See Docket ID Nos. EPA-HQ-OAR-2002-0085-1517 and EPA-HQ-OAR-2003-0051-1885.

⁵ See Docket ID Nos. EPA-HQ-OAR-2002-0085-1518 and EPA-HQ-OAR-2003-0051-1886.

appropriate threshold and is therefore reconsidering this portion.

4. Requirements for Oven Doors at HNR Facilities

For the requirements for oven doors at HNR facilities, the EPA has identified one issue that warrants reconsideration. In its petition for reconsideration, SunCoke argued that the Coke Ovens rule added redundant pressure monitoring requirements using EPA Method 303A that are unnecessary. Specifically, they raised the following concerns:

- Redundant monitoring using EPA Method 303A is not supported by the EPA's technology review;
- EPA Method 303A performance testing is unnecessary when operating coke ovens under negative pressure; and
- Redundant monitoring will not result in earlier detection of door leaks.

C. Compliance Challenges

The items identified for reconsideration in the response letter have compliance dates of July 7, 2025, or January 6, 2026, under the Coke Ovens rule. After further consideration of all the reconsideration issues, the parties' petitions for reconsideration, and further discussions with stakeholders, the EPA has determined that compliance challenges necessitate changes to the compliance dates for fenceline monitoring; the PQBS MACT standards; the leak limits for doors, lids, and offtakes; and the requirements for oven doors at HNR facilities to July 5, 2027. Although the EPA is reconsidering the opacity limits for HNR B/W stacks, we determined that the compliance date for this standard is feasible, so we are not revising the date in this action.

In March 2025, all companies operating cokemaking facilities in the U.S. requested extensions for the compliance dates in the final rule under CAA section 112(i)(3)(B). The EPA's Office of Enforcement and Compliance Assurance sent letters to three companies stating that they did not provide enough information to determine whether the compliance date extensions were warranted. Those letters have since been withdrawn. The specific compliance challenges posed by each of the requirements where we are revising the compliance dates are discussed as follows:

1. Fenceline Monitoring

Fenceline monitoring is used to determine the concentration of ground-level pollutants at the facility boundary. One potential source of those pollutants is leaks from doors, lids, and offtakes at

COBs. The limits for these leaks were revised in the Coke Ovens rule with a compliance date of July 7, 2025. In order to ensure compliance with the revised leak limits, facilities generally need to test current controls, evaluate which additional controls or reconfigurations are needed, secure permits, procure parts and services, install additional equipment, and perform testing on the new controls. Some of these processes can overlap, but some can only be performed sequentially, which the EPA agrees impacts sources' ability to comply within the current timeframe. Therefore, the EPA is revising the deadline to July 5, 2027, to allow sufficient time for the industry to comply given the unanticipated compliance problems and additional information noted earlier in this preamble.

2. PQBS MACT Standards

Petitioners indicated that 18 months is not enough time within which to comply with the PQBS MACT standards by the January 6, 2026, compliance date in the Coke Ovens rule. In their comments on the proposed rulemaking, the COETF requested a 3-year compliance schedule to "allow affected facilities the time needed to evaluate the need for additional emission controls and to assess feasibility and technical risks, design, engineer, procure and install the new equipment before compliance is required."⁶ During a post-comment period meeting on February 6, 2024,⁷ the EPA requested that the COETF provide additional information supporting the need for a 3-year compliance schedule. The COETF submitted this information to the EPA on February 9, 2024 (hereafter referred to as the "Compliance Concerns White Paper").⁸ The Compliance Concerns White Paper provided examples for several units where the MACT emissions standards would likely be exceeded, and it also asserted the following concerns:

- Controlling multiple pollutants and retrofitting controls into existing operations add complexity and time due to interactions in the requirements for control, including pollutant interactions, flow rates, chemistry, and temperatures;

⁶ The COETF also stated that retrofitting new equipment into a facility with already limited space available for the new equipment can require complex mechanical designs that are especially time-consuming.

⁷ As previously mentioned, the public comment period for this rule closed on October 2, 2023.

⁸ See Docket ID Nos. EPA-HQ-OAR-2002-0085-1514 and EPA-HQ-OAR-2003-0051-1882.

- Control technologies for HCN are not technically feasible in the industry; and

- Extensive engineering and physical modifications will be needed for add-on controls, and additional controls would require permitting from the local permitting agency, with permitting taking 6 to 12 months after engineering is completed.

In the Coke Ovens rule, the EPA stated that "... based on the data submitted to the EPA by the industry, all facilities should be able to meet the MACT floor limits developed for the previously unregulated HAP and unregulated sources of HAP without the installation of additional controls" (89 FR 55710, July 5, 2024). However, the information provided after the close of comments in the Compliance Concerns White Paper and in SunCoke's petition for reconsideration—which stated that it has exceeded the limits and provided additional data and information—demonstrates that additional controls may indeed be necessary and/or that operational changes may be required if a facility exceeds the standards that have not been evaluated and that bear on sources' ability to comply with the 18-month schedule in the Coke Ovens rule. This demonstrates that the original timelines in the Coke Oven rule may be infeasible for sources to adhere to, which provides compelling reason for the EPA to revise the deadlines.

Below is a list of the steps petitioners indicated are required to implement additional controls and the amount of time they assert is required for each step:⁹

- Step 1: Test current controls—at least 1 year to complete.
- Step 2: Determine what additional controls will be needed, along with any facility re-designs, monitoring equipment, and software upgrades—at least 1 year to complete.
- Step 3: Secure vendors, as needed, for additional controls, facility re-designs, monitoring equipment, and software upgrades—at least 1 year to complete.
- Step 4: Secure a new permit—at least 6 months to complete. For Title V sources, construction and testing of new air pollution control equipment cannot start until a permit is issued.
- Step 5: Order controls and equipment; book services—at least 1 year to complete.
- Step 6: Re-design the facility (if needed) and install new controls and equipment—at least 1 year to complete.

⁹ See email from D. Ailor, COETF, to J. Witt, EPA OAQPS (May 22, 2025), available in the dockets for this rulemaking.

- Step 7: Test new controls, equipment, and software—at least 6 months to complete.

For all the foregoing reasons, it is infeasible for facilities to meet the PQBS MACT standards within 18 months. Therefore, the EPA is revising the deadlines for these standards to July 5, 2027, to allow sufficient time for the industry to comply with the standards.

3. Leak Limits for Doors, Lids, and Offtakes

The COETF indicated that 1 year is not enough time within which to comply with the revised leak limits for doors, lids, and offtakes by the July 7, 2025, deadline. In the Compliance Concerns White Paper, the COETF explained why 3 years are needed to comply with the limits, including:

- The revised limits are based on limited data. In the Variability White Paper, the COETF stated that the annual average leak rate data used in the proposed rule did not reflect raw material, meteorological, and process variability. Therefore, there is uncertainty as to whether the revised limits can be achieved on a consistent basis, and whether additional investments would be needed in order to ensure compliance, which would take additional time.

- Additional time is needed to research and trial new methods and technologies for meeting the limits, and time is needed to engineer, procure, fabricate, deliver, and install any new technologies or materials that would be needed to meet the limits.

- Replacing door machines and rebuilding or replacing oven doors may be necessary to reduce door leaks. The lead time to engineer, procure, fabricate, deliver, and install 2 new door machines is 5 to 6 years, and the lead time to rebuild or replace oven doors on a typical battery with 82 doors is up to 3 years to engineer, procure, fabricate, and install.

- The only method that the COETF has identified for reducing offtake leaks is replacing or redesigning offtake components. The lead time to engineer, procure, fabricate, and install replacement offtake components on a typical battery is at least 2 to 3 years.

For all the foregoing reasons, it is infeasible for facilities to meet the revised leak limits for doors, lids, and offtakes within 1 year. Therefore, the EPA is revising the deadlines for these standards to July 5, 2027, to allow sufficient time for the industry to comply with the standards. This extension is appropriately tied to the timeline considerations above (all of

which indicate two to three years is required for compliance).

4. Requirements for Oven Doors at HNR Facilities

SunCoke—the only coke oven facility currently operating HNR facilities—stated that it cannot comply with the revised pressure monitoring requirements for oven doors at HNR facilities until the monitoring procedures outlined in the final rule preamble and the regulatory text (89 FR 55735, July 5, 2024) are clarified. Specifically, the company needs to know who is responsible for generating the performance testing the facility must use to calculate leak averages, the methodology and frequency of monitoring, and more specific information on applicability to the facility of the requirements for certain plant components that the facility does not have. Once the procedure has been clarified, SunCoke has stated that it can comply with the requirements within 1 year. The EPA expects to take final action to clarify procedures for pressure monitoring by June 2026. Therefore, the EPA is revising the deadline for these standards to July 5, 2027, currently July 7, 2025, which is appropriately tailored to this timeline.

D. Specific Regulatory Revisions

The regulatory revisions to 40 CFR part 63, subparts L and CCCCC in this action are amending the following sections to revise the relevant compliance deadlines associated with these standards to July 5, 2027:

- 40 CFR 63.302 by revising paragraphs (a)(4) introductory text and (d) introductory text;
- 40 CFR 63.303 by revising paragraphs (a)(1)(iii) and (b)(1)(iii);
- 40 CFR 63.304 by revising paragraph (b)(8) introductory text;
- 40 CFR 63.311 by revising paragraph (h);
- 40 CFR 63.314 introductory text;
- 40 CFR 63.7283 by revising paragraphs (d)(1) and (d)(2);
- 40 CFR 63.7300 by revising paragraph (c)(4) introductory text; and
- 40 CFR 63.7341 by revising paragraph (f).

III. Rulemaking Procedures

As noted in section I.C. of this preamble, the EPA's authority for the rulemaking procedures followed in this action is provided by APA section 553.¹⁰ In general, an agency issuing a

¹⁰ Under CAA section 307(d)(1)(C), the EPA's promulgation or revision of any standard of performance under CAA section 112 would normally be subject to the rulemaking procedural requirements of CAA section 307(d), including

rule under the procedures in APA section 553 must provide prior notice and an opportunity for public comment, but APA section 553(b)(B) permits an agency to forego this requirement “when the agency for good cause finds (and incorporates the finding and a brief statement of reasons, therefore, in the rule issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest.” This action is being issued without prior notice or prior opportunity for public comment because the EPA finds good cause that prior notice and comment would be impracticable under the circumstances.

For the reasons described in detail in section II of this preamble, the EPA finds that prior notice and comment is impracticable here. The EPA has recognized that the original July 2025 and January 2026 compliance deadlines in the Coke Ovens rule are infeasible for regulated parties to meet and therefore must be extended. If the EPA were to seek, evaluate, and respond to comments before finalizing the deadline revisions, it is highly unlikely that the Agency would be able to finalize this action before the July 2025 and January 2026 compliance deadlines, thereby potentially throwing regulated parties into immediate non-compliance. Thus, there is good cause to forego notice and comment to extend the compliance deadlines to July 2027.

In addition to good cause under APA section 553(b)(B) to exempt this action from notice-and-comment requirements, there is also good cause to make this rule effective immediately under APA section 553(d)(1), which provides that the default 30-day effective date can be waived for “a substantive rule which grants or recognizes an exemption or relieves a restriction.” This action relieves restrictions by extending the Coke Ovens rule's 2025 and 2026 compliance deadlines.

IV. Request for Comment

As explained in section III of this preamble, the EPA finds good cause to take this interim final action on compliance deadlines without prior notice or opportunity for public comment. However, the EPA is providing an opportunity for and is requesting comment on the content of the matters described in this action that the EPA determined warrant consideration. The EPA is not reopening for comment any provisions of the Coke

notice-and-comment procedures, but CAA section 307(d) does not apply “in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of [APA section 553(b)].”

Ovens rule other than the specific provisions that are expressly under reconsideration as described in this interim final rule.

V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not an economically significant regulatory action as defined in Executive Order 12866 and is

therefore not subject to a requirement for Executive Order 12866 review. This interim final rule is expected to result in cost savings due to revised compliance deadlines associated with the PQBS MACT standards and the fenceline monitoring requirements under the July 5, 2024, final rule. The EPA prepared an Economic Impact Analysis (EIA) of the potential cost savings and other economic impacts associated with this action. This analysis, *Economic Impact Analysis for the National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Residual Risk and Technology Review*,

and *Periodic Technology Review: Interim Final Rule*, is available in the dockets for this rulemaking.

Table 1 summarizes the estimated changes to compliance costs associated with this interim final action. Costs are measured in 2024 dollars discounted to 2025. This table presents the present values (PV) and equivalent annualized values (EAV) of these estimated impacts discounted using social discount rates of both three and seven percent, in accordance with OMB Circular A–4. The EPA estimates that the interim final rule will result in annualized compliance cost savings of \$4.2 million using a 3% social discount rate and \$4.4 million using a 7% social discount rate.

TABLE 1—SUMMARY OF COMPLIANCE COST SAVINGS FOR THE INTERIM FINAL RULE, DISCOUNTED TO 2025
[Millions of 2024 dollars]

	3 Percent discount rate		7 Percent discount rate	
	PV	EAV	PV	EAV
Compliance Cost Savings	\$8.1	\$4.2	\$7.9	\$4.4

Note: Estimates are rounded to two significant figures.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is considered an Executive order 14192 deregulatory action. Details on the estimated compliance cost savings of this final rule can be found in the EPA's analysis of the potential costs associated with this action. This analysis is contained in the EIA, which is available in the dockets for this rulemaking.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. The Office of Management and Budget (OMB) has previously approved the information collection activities that apply to the coke oven facilities affected by this action and has assigned OMB control numbers 2060–0253 (COB NESHAP) and 2060–0521 (PQBS NESHAP). This action does not change the information collection requirements.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. There are no small entities in this regulated industry. Additional details of the analysis can be found in the EIA, which is available in the dockets for this rulemaking.

E. Unfunded Mandates Reform Act of 1995 (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any State, local or Tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This rule will implement revisions to the compliance dates for certain provisions. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned

regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve technical standards; therefore, the NTTAA does not apply.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801–808, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. The CRA allows the issuing agency to make a rule effective sooner than otherwise provided by the CRA if the agency makes a good cause finding that notice-

and-comment rulemaking procedures are impracticable, unnecessary, or contrary to the public interest (5 U.S.C. 808(2)). The EPA has made a good cause finding for this rule as discussed in section III of this preamble, including the basis for that finding.

List of Subjects in 40 CFR Part 63

Environmental protection,
Administrative practice and procedures,
Air pollution control, Hazardous
substances, Reporting and
recordkeeping requirements.

Lee Zeldin,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart L—National Emission Standards for Coke Oven Batteries

■ 2. Amend § 63.302 by revising paragraphs (a)(4) introductory text and (d) introductory text to read as follows:

§ 63.302 Standards for by-product coke oven batteries.

(a) * * *
(4) On and after July 5, 2027:
* * * * *

(d) Emission limitations and requirements applied to each coke oven battery utilizing a new recovery technology shall be less than the following emission limitations or shall result in an overall annual emissions rate for coke oven emissions for the battery that is lower than that obtained by the following emission limitations on and after July 5, 2027:

* * * * *

■ 3. Amend § 63.303 by revising paragraphs (a)(1)(iii) and (b)(1)(iii) to read as follows:

§ 63.303 Standards for nonrecovery coke oven batteries.

(a) * * *
(1) * * *
(iii) The date for compliance with (a)(1)(i) and (ii) of this section is on and after July 5, 2027.

* * * * *

(b) * * *
(1) * * *

(iii) The date for compliance with (b)(1)(i) and (ii) of this section is on and after July 5, 2027, or upon initial startup, whichever is later.

* * * * *

■ 4. Amend § 63.304 by revising paragraph (b)(8) introductory text to read as follows:

§ 63.304 Standards for compliance date extension.

* * * * *

(b) * * *

(8) On and after July 5, 2027:

* * * * *

■ 5. Amend § 63.311 by revising paragraph (h) to read as follows:

§ 63.311 Reporting and recordkeeping requirements.

* * * * *

(h) *Electronic reporting of compliance certification reports.* Beginning on July 5, 2027, or once the report template for this subpart has been available on the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (k) of this section.

* * * * *

■ 6. Amend § 63.314 by revising the introductory text to read as follows:

§ 63.314 Fenceline monitoring provisions.

For each by-product coke oven battery facility as defined in § 63.301 of this subpart, beginning no later than July 5, 2027, the owner or operator of a coke manufacturing facility shall conduct sampling along the facility property boundary and analyze the samples in accordance with paragraphs (a) through (g) of this section.

* * * * *

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

■ 7. Amend § 63.7283 by revising paragraphs (d)(1) and (2) to read as follows:

§ 63.7283 When do I have to comply with this subpart?

* * * * *

(d) * * *

(1) If you have an existing affected source or a new or reconstructed affected source for which construction or reconstruction commenced on or before August 16, 2023, you must be in compliance no later than July 5, 2027.

(2) If you have a new or reconstructed affected source for which construction or reconstruction commenced after August 16, 2023, you must be in compliance no later than July 5, 2027, or upon startup, whichever is later.

* * * * *

■ 8. Amend § 63.7300 by revising paragraph (c)(4) introductory text to read as follows:

§ 63.7300 What are my operation and maintenance requirements?

* * * * *

(c) * * *

(4) Beginning July 5, 2027, you must identify and implement a set of site-specific good combustion practices for each battery. These good combustion practices should correspond to your standard operating procedures for maintaining the proper and efficient combustion within battery waste heat flues. Good combustion practices include, but are not limited to, the elements listed in paragraphs (c)(4)(i) through (v) of this section.

* * * * *

■ 9. Amend § 63.7341 by revising paragraph (f) to read as follows:

§ 63.7341 What reports must I submit and when?

* * * * *

(f) *Electronic reporting of compliance reports.* Beginning on July 5, 2027, or once the report template for this subpart has been available on the CEDRI website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (h) of this section.

* * * * *

[FR Doc. 2025-12626 Filed 7-3-25; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R4-ES-2019-0081; FXES1113090000-234-FF09E22000]RIN 1018-BD95

Endangered and Threatened Wildlife and Plants; Removal of the Dwarf-flowered Heartleaf From the List of Endangered and Threatened Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2002-0085, EPA-HQ-OAR-2003-0051; FRL-8471.1-04-OAR]

RIN 2060-AW65

National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Rescission of Extension of Compliance Deadlines for Coke Oven Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; rescission of interim final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is rescinding the interim final rule (IFR) titled “National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Residual Risk and Technology Review, and Periodic Technology Review,” published July 8, 2025. This rescission of the IFR effectively reinstitutes the compliance deadlines set forth in the 2024 final rule revising the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the coke ovens source category, published July 5, 2024.

DATES: This rule is effective on December 5, 2025.

ADDRESSES: The EPA has established a docket for this action under Docket ID Nos. EPA-HQ-OAR-2002-0085 for the Pushing, Quenching, and Battery Stacks (PQBS) source category and EPA-HQ-OAR-2003-0051 for the Coke Oven Batteries (COB) source category. All documents in the docket are listed on the <https://www.regulations.gov/> website. Although listed, 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 either electronically through <https://www.regulations.gov/>, or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time, Monday through Friday. The telephone number for the Public Reading Room is

(202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact the U.S. EPA, Attn: Jonathan Witt, Mail Drop: D243-04, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5645; email address: witt.jon@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of “we,” “us,” or “our” is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AG acid gases
 B/W bypass/waste heat
 CAA Clean Air Act
 CBI Confidential Business Information
 CFR Code of Federal Regulations
 COB coke oven batteries
 CRA Congressional Review Act
 D/F dioxins and furans
 EIA Economic Impact Analysis
 EPA Environmental Protection Agency
 FR Federal Register
 HAP hazardous air pollutant(s)
 HCl hydrochloric acid
 HCN hydrogen cyanide
 HF hydrogen fluoride
 HNR heat and nonrecovery (i.e., no chemical recovery), or nonrecovery with no heat recovery
 HRSG heat recovery steam generator
 IFR interim final rule
 MACT maximum achievable control technology
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OMB Office of Management and Budget
 PAH polycyclic aromatic hydrocarbons
 PM particulate matter
 PRA Paperwork Reduction Act
 PQBS pushing, quenching, and battery stacks
 RFA Regulatory Flexibility Act
 UMRA Unfunded Mandates Reform Act
 VOHAP volatile organic HAP

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- K. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (57 FR 31576; July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (EPA-450/3-91-030, July 1992), the Coke Oven Batteries (COB) source category includes emissions from the batteries themselves. The Pushing, Quenching, and Battery Stacks (PQBS) source category includes emissions from pushing and quenching operations, and from battery stacks at a coke oven facility. A coke oven facility is defined as a facility engaged in the manufacturing of metallurgical coke by the destructive distillation of coal.¹ The 2022 North American Industry Classification System (NAICS) code for the COB source category (40 CFR part 63, subpart L) is 324199 for “All Other Petroleum and Coal Products Manufacturing,” and for the PQBS source category (40 CFR part 63, subpart CCCC) is 331110 for “Iron and Steel Mills and Ferroalloy Manufacturing.” The information provided in this section is not intended to be exhaustive but rather provides a guide for readers regarding the entities that this action is likely to affect. The compliance deadlines resulting from this action are directly applicable to the affected sources. Federal, state, local, and Tribal government entities will not be affected by this interim final action. Based on the information we have, 11 operating coke manufacturing facilities are subject to the NESHAP. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

¹ See 90 FR 29999, 29997 (July 8, 2025).

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this action will be available on the internet at <https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-batteries-national-emissions-standards-hazardous-air>.

II. Background

A. What is the statutory authority for this action?

The Clean Air Act (CAA), and CAA section 112 in particular (42 U.S.C. 7412), provides the statutory authority to issue this action.

B. What rule is being rescinded?

On July 8, 2025,² the EPA issued an IFR that extended the compliance deadlines for certain standards that the EPA promulgated in the 2024 rule revisions to the Coke Ovens NESHAP.³ Specifically:

- For the PQBS source category, the EPA extended compliance deadlines from January 6, 2026, to July 7, 2027, for certain maximum achievable control technology (MACT) standards, including:

- New emission standards based on MACT for pushing operations: acid gases (AG), hydrogen cyanide (HCN), mercury (Hg), and polycyclic aromatic hydrocarbons (PAH) (which is also a surrogate for dioxins and furans (D/F), formaldehyde, and volatile organic HAP (VOHAP));⁴

- New emission standards based on MACT for battery stacks: AG, HCN, Hg, and particulate matter (PM) (as a surrogate for non-Hg HAP metals);

- New emission standards based on MACT for HNR heat recovery steam generator (HRSG) main stacks: AG, Hg, PAH (which is also a surrogate for formaldehyde), and PM (as a surrogate for non-Hg HAP metals);

- New emission standards based on MACT for HNR bypass/waste heat (B/W) stacks: AG, formaldehyde (which is also a surrogate for VOHAP), Hg, PAH, and PM (as a surrogate for non-Hg HAP metals); and

- A new MACT standard, in the form of a good combustion practices work practice standard, for PAH, D/F, and VOHAP emitted from battery stacks.

- For the COB source category, the EPA extended compliance deadlines from July 7, 2025, to July 5, 2027, for

fenceline monitoring requirements; revised leak standards for doors, lids, and offtakes; and revised pressure monitoring requirements for oven doors at heat and nonrecovery (HNR) facilities.

As a result of rescinding the IFR, the original deadlines in the 2024 rule revisions to the Coke Ovens NESHAP will apply to this source category. As explained below, the EPA does not believe that rescinding the IFR will trigger immediate compliance difficulties with relevant deadlines and remains committed to engaging with relevant stakeholders to promote compliance efforts and provide technical assistance. Moreover, the EPA notes that interested parties will have an opportunity to comment on proposed changes to the Coke Ovens NESHAP in the forthcoming rulemaking, announced on March 12, 2025, to reconsider the applicable standards.

III. Why is the EPA rescinding the IFR?

On July 8, 2025, the Agency issued an IFR that extended the compliance dates for fenceline monitoring, PQBS MACT standards, leak limits for doors, lids, and offtakes, and HNR oven door requirements to July 5, 2027.⁵ The IFR stated that the comment period would remain open until August 7, 2025. On August 6, 2025, the EPA extended the comment period to September 25, 2025 (Doc. ID EPA-HQ-OAR-2003-0051-2006). On August 15, 2025, the EPA announced that the Agency would hold a public hearing on the IFR on September 4, 2025. In response to the comment period and at the public hearing, the EPA received a number of comments and oral submissions from interested stakeholders, including participants in the coke ovens industry and environmental groups.

At the time the EPA promulgated the IFR, the Agency had been made aware of serious concerns that, without the installation of additional controls that may be unavailable or infeasible, industry would be unable to comply with both the MACT standards for the PQBS source category and the leak limits for doors, lids, and offtakes in the COB source category, thus necessitating additional time beyond the compliance deadlines.⁶ Rather than risking serious disruption to coke processing, which would in turn disrupt production of iron and steel critical for our nation's infrastructure and national security interests, the EPA extended the compliance deadlines for these standards without prior notice and

comment and invited public input on the necessity and details of the compliance date extensions.

Among other things, the EPA solicited information from regulated parties on occurrences that would have constituted noncompliance with the standards as written in the 2024 Rule absent the compliance deadline extensions in IFR.

In response to the solicitation, the EPA received data on only a small number of exceedances of the standards for doors and lids (but not offtakes) that occurred prior to promulgation of the IFR (Doc. ID EPA-HQ-OAR-2003-0051-2013). Upon review of this and other information received in public comments and at the public hearing, the EPA does not believe that the currently available information supports a conclusion that regulated parties would face significant immediate compliance challenges meeting the PQBS MACT standards or the COB leak limits for doors, lids, and offtakes if the compliance deadlines were not changed, such that only a change in compliance date provided within the IFR would alleviate regulated parties' concerns. Thus, the EPA is rescinding the IFR compliance deadline extensions for these standards, as well as the extension for the associated fenceline monitoring requirements promulgated in the 2024 rule to promote compliance with the standards.

IV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and therefore was not submitted to the Office of Management and Budget (OMB) for review. The EPA prepared an Economic Impact Analysis (EIA) estimating the compliance cost savings associated with extending these compliance deadlines. The EIA estimated the IFR would result in a present value (PV) of \$8.1 million of compliance cost savings (\$4.2 million equivalent annualized value, or EAV) using a 3 percent social discount rate and a PV of \$7.9 million of compliance cost savings (\$4.4 million EAV) using a 7 percent social discount rate. The estimated compliance cost savings resulted from two years during which operation and maintenance costs associated with the fenceline monitoring requirements and

² *Id.* at 29997.

³ 89 FR 55684 (July 5, 2024).

⁴ Acid gases include hydrochloric acid (HCl) and hydrogen fluoride (HF).

⁵ 90 FR 29997.

⁶ *Id.* at 29997, 30001-02.

compliance testing, recordkeeping, and reporting costs associated with the new or revised emission standards were no longer required. The EAV were annualized over two years to reflect the length of time during which the EPA expected the compliance deadline extension to impact compliance costs at coke oven facilities relative to an analytical baseline requiring compliance at the original deadlines. This action rescinds the IFR, in effect reinstituting the compliance deadlines from the 2024 final rule. As a result, the EPA no longer expects the compliance cost savings estimated in the EIA to occur.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is not an Executive Order 14192 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. The Office of Management and Budget (OMB) has previously approved the information collection activities that apply to the coke oven facilities affected by this action and has assigned OMB control numbers 2060–0253 (COB NESHAP) and 2060–0521 (PQBS NESHAP). This action does not change the information collection requirements.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities.

E. Unfunded Mandates Reform Act of 1995 (UMRA)

This action does not contain an unfunded mandate of \$100 million (adjusted annually for inflation) or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any State, local or Tribal governments. Although this action creates an enforceable duty on the private sector, the cost does not exceed \$100 million or more.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This rule will implement revisions to the compliance dates for certain provisions. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve technical standards; therefore, the NTTAA does not apply.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801–808, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This is not a major action as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart L—National Emission Standards for Coke Oven Batteries

■ 2. Amend § 63.302 by revising paragraph (a)(4) introductory text and paragraph (d) introductory text to read as follows:

§ 63.302 Standards for by-product coke oven batteries.

(a) * * *

(4) On and after July 7, 2025:

* * * * *

(d) Emission limitations and requirements applied to each coke oven battery utilizing a new recovery technology shall be less than the following emission limitations or shall result in an overall annual emissions rate for coke oven emissions for the battery that is lower than that obtained by the following emission limitations on and after July 7, 2025:

* * * * *

■ 3. Amend § 63.303 by revising paragraphs (a)(1)(iii) and (b)(1)(iii) to read as follows:

§ 63.303 Standards for nonrecovery coke oven batteries.

(a) * * *

(1) * * *

(iii) The date for compliance with paragraphs (a)(1)(i) and (ii) of this section is on and after July 7, 2025.

* * * * *

(b) * * *

(1) * * *

(iii) The date for compliance with paragraphs (b)(1)(i) and (ii) of this section is on and after July 7, 2025, or upon initial startup, whichever is later.

* * * * *

■ 4. Amend § 63.304 by revising paragraph (b)(8) introductory text to read as follows:

§ 63.304 Standards for compliance date extension.

* * * * *

(b) * * *

(8) On and after July 7, 2025:

* * * * *

■ 5. Amend § 63.311 by revising paragraph (h) to read as follows:

§ 63.311 Reporting and recordkeeping requirements.

* * * * *

(h) *Electronic reporting of compliance certification reports.* Beginning on July 7, 2025, or once the report template for this subpart has been available on the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (k) of this section.

* * * * *

■ 6. Amend § 63.314 by revising the introductory text to read as follows:

§ 63.314 Fenceline monitoring provisions.

For each by-product coke oven battery facility as defined in § 63.301, beginning no later than July 7, 2025, the owner or operator of a coke manufacturing facility shall conduct sampling along the facility property boundary and analyze the samples in accordance with paragraphs (a) through (g) of this section.

* * * * *

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

■ 7. Amend § 63.7283 by revising paragraphs (d)(1) and (2) to read as follows:

§ 63.7283 When do I have to comply with this subpart?

* * * * *

(d) * * *

(1) If you have an existing affected source or a new or reconstructed affected source for which construction or reconstruction commenced on or before August 16, 2023, you must be in compliance no later than January 5, 2026.

(2) If you have a new or reconstructed affected source for which construction or reconstruction commenced after August 16, 2023, you must be in compliance no later than January 5, 2026, or upon startup, whichever is later.

* * * * *

■ 8. Amend § 63.7300 by revising paragraph (c)(4) introductory text to read as follows:

§ 63.7300 What are my operation and maintenance requirements?

* * * * *

(c) * * *

(4) Beginning January 5, 2026, you must identify and implement a set of site-specific good combustion practices for each battery. These good combustion practices should correspond to your

standard operating procedures for maintaining the proper and efficient combustion within battery waste heat flues. Good combustion practices include, but are not limited to, the elements listed in paragraphs (c)(4)(i) through (v) of this section.

* * * * *

■ 9. Amend § 63.7341 by revising paragraph (f) to read as follows:

§ 63.7341 What reports must I submit and when?

* * * * *

(f) *Electronic reporting of compliance reports.* Beginning on July 7, 2026, or once the report template for this subpart has been available on the CEDRI website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (h) of this section.

* * * * *

[FR Doc. 2025-22034 Filed 12-4-25; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[WC Docket Nos. 12-375, 23-62; FCC 25-75; FR ID 319372]

Incarcerated People's Communication Services; Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) modifies the Commission's previous incarcerated people's communications services (IPCS) rate caps in response to record evidence of the significant unintended consequences of those rate caps. It establishes new interim audio and video IPCS rate caps by basing the calculation of the Commission's rate caps only on billed minutes, incorporating all safety and security measure expenses that IPCS providers reported incurring, and creating an additional rate cap tier for extremely small jails. It also creates a separate interim rate additive to ensure recovery of correctional facilities' costs of administering IPCS. Additionally, it sets a new compliance date for providers' compliance with the new rules and clarifies that the rate cap, site commission, and per-minute pricing

rules from the Commission's 2021 Order will no longer apply following that date.

DATES:

Effective date: This rule is effective December 5, 2025.

Compliance date: compliance with this rule will be required on April 6, 2026.

FOR FURTHER INFORMATION CONTACT:

Shabbir Hamid, Pricing Policy Division of the Wireline Competition Bureau, at (202) 418-2328 or via email at shabbir.hamid@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order and Order on Reconsideration, document FCC 25-75, adopted on October 28, 2025 and released on November 6, 2025, in WC Docket Nos. 12-375 and 23-62. This summary is based on the public redacted version of the document, the full text of this document can be obtained from the Commission's Electronic Document Management System (EDOCS) website at www.fcc.gov/edocs or via the Commission's Electronic Comment Filing System (ECFS) website at www.fcc.gov/ecfs, or is available at the following internet address: <https://docs.fcc.gov/public/attachments/FCC-25-75A1.pdf>.

Synopsis

I. Introduction

1. The rates and other practices of the incarcerated people's communications services (IPCS) industry have been the subject of the Commission's and Congress' attempts to ensure just and reasonable rates for consumers and fair compensation for providers for over a decade. Indeed, the Commission has attempted on multiple occasions over the last 12 years to address these issues, spawning multiple rounds of litigation in several federal courts. With the passage of the Martha Wright-Reed Act and its implementation by the Commission in the *2024 IPCS Order*, the regulatory framework to achieve these dual goals was largely established. But in taking those steps, the new regulatory framework has led to significant unintended consequences that have been brought to light by stakeholders, as well as other challenges that are currently before the First Circuit. The ongoing implementation challenges and the resulting risks to safety and security they cause greatly exceed what the Commission considered or anticipated when it adopted the *2024 IPCS Order*, leading the Commission to today's action.

2. The goal of today's action is to establish a regulatory framework that is

bears a relationship to other actions undertaken by other agencies relevant to NEPA, *e.g.*, that a set of related actions are all related to one overarching project.

(p) *Scope* consists of the range of actions, alternatives, and effects subject to the Corps legal authority or subject to the Corps control and responsibility that should be considered in an environmental document. This part addresses the considerations for use by District Engineers when determining scope for NEPA compliance in § 333.18 of this part.

(q) *Tiering* when used for the purposes of multi-phased reviews of activities under 33 U.S.C. 408, refers to the coverage of general matters in broader environmental impact statements or environmental assessments (such as a general plan to address a need that identifies different conceptual options) with subsequent narrower or more detailed statements or environmental analyses (such as an analysis of how one of those conceptual options could be implemented at a specific site) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.

Subpart H—Severability

§ 333.71 Severability.

The sections of this part are separate and severable from one another. If any section or portion therein is stayed or determined to be invalid, or the applicability of any section to any person or entity is held invalid, it is the Corps' intention that the validity of the remainder of those parts will not be affected. The remaining sections or portions, and all applications thereof, shall continue to be in effect.

Approved by:

D. Lee Forsgren,

Acting Assistant Secretary of the Army (Civil Works).

[FR Doc. 2025–12360 Filed 7–1–25; 2:30 pm]

BILLING CODE 3720–58–P

POSTAL SERVICE

39 CFR Part 955

Rules of Practice Before the Postal Service Board of Contract Appeals; Corrections

AGENCY: Postal Service.

ACTION: Correcting amendments.

SUMMARY: On June 18, 2025, the Postal Service amended the rules of practice

that govern all proceedings before the Postal Service Board of Contract Appeals. That document inadvertently misnumbered a paragraph. This document corrects the error.

DATES: Effective July 3, 2025.

ADDRESSES: Postal Service Judicial Officer Department, 2101 Wilson Boulevard, Suite 600, Arlington, VA 22201–3078.

FOR FURTHER INFORMATION CONTACT: Staff Counsel Sheena Allen at (240) 636–4158.

SUPPLEMENTARY INFORMATION: The final rule published on June 18, 2025, at 90 FR 25895, regarding amendments to the rules of practice that govern all proceedings before the Postal Service Board of Contract Appeals, contains an error. It inadvertently added the subparagraph number “(ii)” twice for § 955.29(c)(1). The Postal Service makes this change below to correct the error.

List of Subjects in 39 CFR Part 955

Administrative practice and procedure, Contract disputes, Postal Service.

Accordingly, for the reasons stated, 39 CFR part 955 is corrected by making the following correcting amendments:

PART 955—RULES OF PRACTICE BEFORE THE POSTAL SERVICE BOARD OF CONTRACT APPEALS

■ 1. The authority citation for part 955 continues to read as follows:

Authority: 39 U.S.C. 204, 401; 41 U.S.C. 7101–7109.

■ 2. In § 955.29, amend paragraph (c)(1) to read as follows:

§ 955.29 (Rule 29) Subpoenas.

* * * * *

(c) *Requests for subpoenas.* (1) A request for a subpoena must normally be filed at least:

(i) 15 days before the scheduled deposition of a witness or production by a witness or custodian of documents, electronically stored information, and tangible things;

(ii) 30 days before a scheduled hearing; or

(iii) Notwithstanding paragraphs (c)(1)(i) and (ii) of this section, the Board may honor requests for subpoenas not made within these time limits.

* * * * *

Kevin Rayburn,

Attorney, Ethics and Legal Compliance.

[FR Doc. 2025–12411 Filed 7–2–25; 8:45 am]

BILLING CODE P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2002–0083; FRL–5919.4–03–OAR]

National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Technology Review: Interim Final Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule; request for comment.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is taking interim final action on the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Manufacturing Facilities to revise certain compliance deadlines for standards finalized in 2024.

Specifically, the EPA is revising certain compliance deadlines in the 2024 rule to April 3, 2027, in light of serious concerns that facilities will be unable to comply with the relevant requirements by the existing deadlines.

DATES: This interim final rule is effective on July 2, 2025. Comments on this rule must be received on or before August 1, 2025.

ADDRESSES: You may send comments, identified by Docket ID No. EPA–HQ–OAR–2002–0083 by any of the following methods:

- *Federal eRulemaking Portal:* <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.

- *Email:* a-and-r-docket@epa.gov. Include Docket ID No. EPA–HQ–OAR–2002–0083 in the subject line of the message.

- *Fax:* (202) 566–9744. Attention Docket ID No. EPA–HQ–OAR–2002–0083.

- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA–HQ–OAR–2002–0083, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

- *Hand/Courier Delivery:* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m.–4:30 p.m., Monday–Friday (except Federal Holidays).

Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments, see the “Public

Participation” heading of the General Information section of this document.

FOR FURTHER INFORMATION CONTACT: U.S. EPA, Attn: Katie Boaggio, Mail Drop: D243–02, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, North Carolina, 27711; telephone number: (919) 541–2223; email address: boaggio.katie@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of “we,” “us,” or “our” is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

APA Administrative Procedure Act
 BF blast furnace
 BOPF basic oxygen process furnace
 CAA Clean Air Act
 CBI Confidential Business Information
 CFR Code of Federal Regulations
 CRA Congressional Review Act
 EPA Environmental Protection Agency
 FR Federal Register
 HAP hazardous air pollutant(s)
 HCl hydrochloric acid
 I&S Integrated Iron and Steel
 MACT maximum achievable control technology
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OAQPS Office of Air Quality Planning and Standards
 OMB Office of Management and Budget
 PRA Paperwork Reduction Act
 RFA Regulatory Flexibility Act
 THC total hydrocarbons
 UMRA Unfunded Mandates Reform Act

Organization of this document. The information in this preamble is organized as follows:

- I. General Information
 - A. Public Participation
 - B. Potentially Affected Entities
 - C. Statutory Authority
 - D. Judicial Review and Administrative Review
- II. Regulatory Revisions
 - A. Integrated Iron & Steel NESHAP Background and Summary
 - B. Petitions for Reconsideration
 - C. Compliance Challenges
 - D. Specific Regulatory Revisions
- III. Rulemaking Procedures
- IV. Request for Comment
- V. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
 - B. Executive Order 14192: Unleashing Prosperity Through Deregulation
 - C. Paperwork Reduction Act (PRA)
 - D. Regulatory Flexibility Act (RFA)

- E. Unfunded Mandates Reform Act of 1995 (UMRA)
- F. Executive Order 13132: Federalism
- G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
- H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
- I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51
- K. Congressional Review Act (CRA)

I. General Information

A. Public Participation

Submit your written comments, identified by Docket ID No. EPA–HQ–OAR–2002–0083, at <https://www.regulations.gov> (our preferred method), or by the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit to the EPA’s docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. This type of information should be submitted as discussed in the *Submitting CBI* section of this document. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). Please visit <https://www.epa.gov/dockets/commenting-epa-dockets> for additional submission methods; the full EPA public comment policy; information about CBI or multimedia submissions; and general guidance on making effective comments.

Submitting CBI. Do not submit information containing CBI to the EPA through <https://www.regulations.gov>. Clearly mark the part or all the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, note the docket ID, mark the outside of the digital storage media as CBI, and identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as

CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in the *Public Participation* section of this document. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI and note the docket ID. Information not marked as CBI will be included in the public docket and the EPA’s electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2.

Our preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (*e.g.*, Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the Office of Air Quality Planning and Standards (OAQPS) CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and note the docket ID. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link. If sending CBI information through the postal service, please send it to the following address: U.S. EPA, Attn: OAQPS Document Control Officer, Mail Drop: C404–02, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, North Carolina 27711, Attention Docket ID No. EPA–HQ–OAR–2002–0083. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

B. Potentially Affected Entities

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576; July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (see EPA–450/3–91–030; July 1992), the Integrated Iron and Steel Manufacturing Facilities source category includes any facility engaged in producing steel from refined iron ore (also known as taconite pellets). These facilities first produce iron from iron ore taconite pellets, sinter, coke, and other raw materials using blast furnaces (BFs), then produce steel from the hot liquid iron produced from the blast furnaces, along with coke, lime, alloys, steel scrap, and other raw materials using

basic oxygen process furnaces (BOPFs). Integrated iron and steel manufacturing includes the following processes: sinter production, iron production, iron preparation (hot metal desulfurization), and steel production. The iron production process includes the production of iron in BF's by the reduction of iron-bearing materials with a very hot gas. The steel production process includes BOPFs and ladle metallurgy operations. The 2022 North American Industry Classification System (NAICS) code for the source category is 331110 for "Iron and Steel Mills and Ferroalloy Manufacturing." The NAICS code serves as a guide for readers outlining the type of entities that this interim final action is likely to affect. Currently there are eight operating facilities in this source category.

The information provided in this section on potentially affected entities is not intended to be exhaustive. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

C. Statutory Authority

Statutory authority to issue the amendments finalized in this action is provided by the same Clean Air Act (CAA) provision that provided authority to issue the regulations being amended: CAA section 112, 42 U.S.C. 7412. Statutory authority for the rulemaking procedures followed in this action is provided by Administrative Procedure Act (APA) section 553(b)(B), 5 U.S.C. 553(b)(B).

D. Judicial Review and Administrative Review

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by September 2, 2025. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

II. Regulatory Revisions

A. Integrated Iron & Steel NESHAP Background and Summary

The EPA initially set maximum achievable control technology (MACT) standards for the Integrated Iron and Steel (IIS) Manufacturing Facilities source category on May 20, 2003 (68 FR 27646), codified at 40 CFR part 63, subpart FFFFF, and as part of a residual

risk and technology review, finalized amendments to the standards on July 13, 2020 (85 FR 42074). Subsequently, on April 3, 2024, the EPA completed a second technology review under a court-ordered deadline¹ by finalizing amendments to 40 CFR part 63, subpart FFFFF (89 FR 23294). The amendments included: (1) MACT standards to address previously unregulated emissions of hazardous air pollutants (HAP) from the IIS Manufacturing Facilities source category pursuant to our interpretation of *Louisiana Environmental Action Network v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020) ("LEAN"); and (2) revised emissions standards based on new information regarding developments in practices, processes, and control technologies pursuant to CAA section 112(d)(6).

Relevant to this action, the 2024 rule finalized the following: (1) new MACT standards, in the form of numeric emission limits, for five previously unregulated HAP (carbonyl sulfide, carbon disulfide, mercury, hydrogen chloride (HCl), and hydrogen fluoride) emitted from the sinter plants located at IIS manufacturing facilities; (2) new MACT standards, in the form of opacity limits and work practice standards, for five previously unregulated sources of unmeasured fugitive and intermittent particulate emissions: Unplanned bleeder valve openings, planned bleeder valve openings, beaching, bell leaks, and slag processing, handling and storage; and (3) new MACT standards, in the form of numeric emission limits, for unregulated pollutants from BF stoves and BOPFs: total hydrocarbons (THC) (as a surrogate for non-dioxin and non-furan organic HAP), HCl, and dioxins/furans (D/F); and for unregulated pollutants for BF's: THC (as a surrogate for non-dioxin and non-furan organic HAP) and HCl. Additionally, pursuant to CAA section 112(d)(6), the 2024 rule also finalized: (1) work practice standards for the BOPF shops; (2) a requirement that facilities conduct EPA Method 9 readings two times per month at the BOPF Shop and BF casthouse; (3) a fence line monitoring requirement for chromium for the stated purpose of ensuring that the work practice standards and opacity limits are achieving the anticipated reductions; and (4) revised standards for D/F and polycyclic aromatic hydrocarbons (PAH) from sinter plants to reflect the installation and operation of activated carbon injection (ACI) technology.

B. Petitions for Reconsideration

Following the issuance of the 2024 rule, the EPA was notified by industry parties that there were several errors in the final regulatory text and certain items that the EPA had not properly raised for comment during the proposal. The United States Steel Corp. and Cleveland-Cliffs Inc. submitted administrative petitions for reconsideration on June 3, 2024, detailing those errors, requesting corrections, and expressing concerns regarding the technical feasibility of certain new requirements. The industry parties additionally submitted requests for an administrative stay of the 2024 rule pursuant to CAA section 307(d)(7)(B). Earthjustice on behalf of environmental petitioners challenging the 2020 and 2024 IIS rules² also submitted a petition for reconsideration regarding alleged improper notice related to several of the new requirements finalized in the rules.

The Agency responded to the petitions for reconsideration on August 14, 2024, granting discretionary reconsideration of three issues (the numeric emission limit for HCl from BF casthouses and the work practice standards for unplanned bleeder valve openings and beaching) and expressing the intention to issue a correction notice to do the following:

1. clarify that the definition of an "unplanned bleeder valve opening" includes only those openings that are not located downstream from a control device (i.e., "dirty bleeder valve openings");
2. clarify the timing of planned openings and how they may affect opacity readings;
3. clarify the definition of a "single bleeder valve opening event";
4. delete from 40 CFR part 63, subpart FFFFF, Table 2 the emission standard for "windbox exhaust stream" for BF casthouses, BF stoves, and BOPF shops because these sources do not have a windbox exhaust stream; and
5. clarify the method that must be used to measure opacity for bell leaks.

The EPA also committed to continue reviewing additional issues raised in the petitions for reconsideration.

After receiving the EPA's August 14, 2024 response letter, industry petitioners contacted EPA staff to provide additional information regarding the five correction items. These further discussions resulted in a determination by the Agency that some of the corrections and discretionary

¹ See *California Communities Against Toxics, et al. v. Pruitt*, Case No. 15–512 (D.D.C.), Orders (Feb. 19, 2020; April 14, 2021; Sept. 20, 2023).

² Earthjustice is counsel for Clean Air Council, Gary Advocates for Responsible Development, Hoosier Environmental Council, and Sierra Club.

reconsideration items instead warranted mandatory reconsideration under CAA section 307(d)(7)(B).³

As a result, on March 5, 2025, the EPA issued a second letter modifying the scope of the already convened discretionary reconsideration proceeding by identifying several items from the petitions for reconsideration as appropriate for mandatory reconsideration based on the criteria in CAA section 307(d)(7)(B): (1) work practice standards for unmeasured fugitive and intermittent particulate from unplanned bleeder valve openings; (2) the opacity limit for planned bleeder valve openings; (3) work practice standards for bell leaks; and (4) the opacity limit for slag processing and handling.⁴

Considering the need for additional time for the EPA's mandatory reconsideration of some aspects of the 2024 rule, on March 31, 2025, we determined that a partial stay of the final rule was necessary and issued the *Partial Administrative Stay of National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Technology Review*, 90 FR 14207 (March 31, 2025). With that action, the EPA stayed the April 3, 2025, compliance deadlines contained in the 2024 rule until July 1, 2025.

C. Compliance Challenges

Most of the items identified for reconsideration in the two response letters have compliance deadlines of April 3, 2025, or April 3, 2026. After further consideration of all the reconsideration issues, the parties' petitions for reconsideration, and further discussion with stakeholders, the EPA has determined to revise the 2025 and 2026 compliance deadlines in the II&S Manufacturing Facilities NESHAP to April 3, 2027, for unplanned bleeder valve openings, planned bleeder valve openings, bell leaks, slag processing and handling, beaching, and BF/BOPF work practices. The revision of these compliance deadlines will avoid documented issues regarding compliance with the 2024 rule with respect to the items being reconsidered and corrected. When the

EPA promulgated the standards at issue in this action with compliance deadlines in 2025—opacity standards for planned openings, work practice standards for bell leaks, and the monitoring frequency for BOPF/BF—the EPA concluded that these standards could be met without the need for installation of new control equipment, monitors, or measurement equipment. Therefore, the EPA provided only one year to comply with those standards (*i.e.*, a compliance deadline of April 3, 2025).

However, after promulgation of the 2024 rule, information was provided to the EPA by industry parties in their CAA section 307(d) petitions for administrative reconsideration that facilities may not be able to comply with the standards as written by the April 3, 2025 deadline without clarifications, corrections, or revisions.⁵ Additionally, industry petitioners provided new supplemental monitoring data to the EPA to support their petitions for reconsideration. These data demonstrate that it likely will be infeasible for a majority of sources to comply with the 2024 rule's opacity limits for planned bleeder valve openings. The supplemental monitoring was performed by industry to substantiate comments they submitted during the public comment period regarding certain source-by-source operational variabilities. But, because the EPA was under a court-ordered deadline to promulgate the final rule, the Agency did not have time to fully evaluate those comments and underlying data and their implications. Industry was therefore not aware of the need for the supplemental data and explanation of source variability until after the 2024 rule was finalized. These supplemental datasets provided by affected sources to support the industry petitions for reconsideration were not available to the EPA until after the 2024 rule was finalized.

While the EPA concluded there are work practices available to minimize opacity, these new data provide evidence that there is more variability in each source's operations and opacity than we accounted for in developing the final opacity standards. Additionally, for bell leaks, it was brought to the EPA's attention that the 2024 rule's regulatory language setting compliance action levels is inconsistent with what was proposed and needs to be clarified for compliance to be achieved. Finally, for BOPF shops and BF casthouses,

through the petitions, the EPA realized there is ambiguity in the regulatory text for the monitoring frequency and location of fugitive emissions that must be addressed to clarify how to demonstrate compliance with these standards.

Likewise, when the EPA promulgated the operational limit for unplanned openings, the opacity limit for slag operations, and the work practice standards for beaching, the EPA had concluded that facilities could comply with these limits in two years, by April 3, 2026, based on the understanding that facilities only had to make relatively moderate changes in equipment or operations to comply with those standards. Those expected changes included installing: (1) stockline monitors to measure material flows in the blast furnaces and/or material sizing equipment or screens to ensure input material was properly sized, to help prevent unplanned openings; (2) fogging and/or water spray equipment to minimize opacity for slag processing operations; and (3) partial enclosures or carbon dioxide suppression to minimize fugitives from beaching. However, based on additional information provided by the petitioners after promulgation of the rule and after further discussions and analyses, the EPA now understands that, in some cases, the equipment and work practices are insufficient or infeasible to meet the standards as currently written. Therefore, some affected sources will likely need more than two years to comply with the standards as finalized.

For unplanned openings, the EPA intended that the finalized standard would only apply to unplanned openings that are not routed to a control device. However, the EPA inadvertently finalized the standard such that it also applies to bleeder valve openings that go through a control device. This technical error will increase the number of unplanned openings that count towards the yearly operational limit, which makes the limit unachievable until a correction is made. For slag handling and processing, new data were provided in the petitions that show higher opacity concentrations than previously known by the EPA for certain specific slag processing and handling activities. For beaching, the EPA failed to adequately consider some feasibility challenges with certain required work practices.

Furthermore, the EPA recognizes that additional corrections, clarifications, and/or revisions to these standards are needed, and such changes cannot be made without an opportunity for notice and comment.

³ Under CAA section 307(d)(7)(B), 42 U.S.C. 7607(d)(7)(B), the Administrator shall convene a proceeding for reconsideration of a rule when the person raising an objection to a rule can demonstrate: (1) that it was either impractical to raise the objection during the period for public comment or that the grounds for the objection arose after the period for public comment; and (2) that the objection is of central relevance to the outcome of the rule.

⁴ Copies of both EPA response letters are included in Docket ID No. EPA-HQ-OAR-2002-0083.

⁵ The CAA section 307(d) petitions for administrative review of the 2024 rule are available in the docket for this action.

For all the foregoing reasons, the EPA is revising the 2025 and 2026 compliance deadlines for the standards described above to April 3, 2027, to allow sufficient time to address the issues discussed above and to allow sufficient time for compliance in light of the new data and information presented to the Agency. For consistency, even though there is no operational deadline that applies to fence line monitoring currently, we are also revising the deadline for fence line monitoring to 1 year after promulgation of the test method or April 3, 2027, whichever is later.

D. Specific Regulatory Revisions

The regulatory revisions to 40 CFR part 63, subpart FFFFF in this action are amending 40 CFR 63.7783 by revising paragraph (g), adding paragraph (h), and amending 40 CFR 63.7792 by revising paragraph (a) to revise the relevant compliance deadlines associated with the standards in this rule to April 3, 2027.

III. Rulemaking Procedures

As noted in section I.C. of this preamble, the EPA's authority for the rulemaking procedures followed in this action is provided by APA section 553, 5 U.S.C. 553.⁶ In general, an agency issuing a rule under the procedures in APA section 553 must provide prior notice and an opportunity for public comment, but APA section 553(b)(B) includes an exemption from notice-and-comment requirements "when the agency for good cause finds (and incorporates the finding and a brief statement of reasons, therefore, in the rule issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest." This action is being issued without prior notice or opportunity for public comment because the EPA finds that the APA "good cause" exemption from notice-and-comment requirements applies here.

For the reasons described in detail in Section II above, notice-and-comment is impracticable here. First, the EPA has granted petitions for administrative reconsideration of numerous provisions of the 2024 rule and has committed to develop a rulemaking that will be subject to notice-and-comment. See 90 FR 14207, 14208 (March 31, 2025). The

reconsideration action is needed because the EPA recognizes that procedural and drafting errors made in the rulemaking process in addition to information that was not submitted by the regulated parties until after the close of the comment period for the proposed rule led the EPA to promulgate regulations that pose compliance challenges that must be resolved before regulated parties will be able to comply with many provisions of the 2024 rule. Because the existing compliance deadlines require action by facilities in the short-term, including investment decisions and modifications to equipment and operating procedures with a significant lead time, revising the compliance dates through prior notice and comment procedures would be impracticable. Second, on March 31, 2025, the EPA issued an administrative stay of the 2025 deadlines contained in the 2024 rule until July 1, 2025 (90 FR 14207; March 31, 2025). If the EPA were to evaluate comments on this action before finalizing it, it is highly likely that the Agency would miss the July 1, 2025, deadline to revise the 2025 compliance deadlines, thereby potentially throwing regulated parties into immediate non-compliance with regulatory requirements that will most likely be revised during the reconsideration rulemaking process. Prior notice and comment procedures are impracticable on this basis as well.

The EPA is also making this rule effective immediately as "a substantive rule which grants or recognizes an exemption or relieves a restriction" under APA section 553(d)(1). This action relieves restrictions by revising the 2024 rule's 2025 and 2026 compliance deadlines.

IV. Request for Comment

As explained in section III of this document, the EPA finds good cause to take this interim final action without prior notice or opportunity for public comment. However, the EPA is requesting comment on the revised compliance dates described in this rule. The EPA is not reopening for comment any provisions of the 2024 rule other than the specific provisions and compliance dates that are expressly amended in this interim final rule.

V. Statutory and Executive Order Reviews

Additional information about these statutes and executive orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This is a significant regulatory action under Executive Order section 3(f)(1) that was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket. The EPA prepared a regulatory impact analysis (RIA) of the potential costs and benefits associated with this action. This analysis, *Regulatory Impact Analysis for the National Emission Standard for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Technology Review: Interim Final Rule*, is consistent with Executive Order 12866 and is available in the docket. The RIA analyzes impacts over the period 2025 to 2035 to replicate the analytical timeframe used in the RIA for the 2024 final rule. This interim final action is not based on the estimated costs or benefits presented in the RIA, but rather is based on concerns regarding the technical feasibility of certain regulatory requirements.

Under the 2024 rule, IIS manufacturing facilities must perform required work practices or meet a specified opacity or operational limit (or both) for each UFIP emissions source. Revising the compliance deadlines for these sources allows affected facilities to defer capital investment and avoid operating and maintenance (O&M) costs over the period during which compliance is no longer required. The compliance cost savings estimated by this analysis represent these avoided O&M costs and deferred capital investment costs.

Under this interim final rule, the 2024 rule would no longer reduce emissions of HAP from UFIP emissions sources over the period April 3, 2025, through April 3, 2027, as projected in the RIA for the 2024 rule.⁷ The potential benefits from these reductions of HAP were not monetized in that RIA and potential benefit impacts associated with HAP emissions changes due to this interim final rule were not monetized. The interim final rule is also expected to affect emissions of unregulated pollutants such as PM_{2.5}. The methodology for estimating these emission changes and monetizing the associated benefit impacts is described

⁶ Under CAA section 307(d)(1)(C), the EPA's promulgation or revision of any standard of performance under CAA section 112 would normally be subject to the rulemaking procedural requirements of CAA section 307(d), including notice-and-comment procedures, but CAA section 307(d) does not apply "in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of [APA section 553(b)]."

⁷ "Regulatory Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Technology Review" (Ref. EPA-452/R-24-012). Docket ID No. EPA-HQ-OAR-2002-0083-1977.

in the RIA for this action and the RIA for the 2024 rule. The estimated changes to emissions caused by this interim final rule are expected to be zero for the remainder of the analytical timeframe covered by the RIA.

Table 1 summarizes the estimated changes to compliance costs and emissions associated with this interim final action from 2025–2035. Costs are measured in 2024 dollars discounted to 2025. Emissions changes are measured in short tons. This table presents the

present values (PV) and equivalent annualized values (EAV) of these estimated impacts discounted using social discount rates of both three and seven percent, in accordance with OMB Circular A–4. The EAV figures are annualized over 11 years to reflect the length of the timeframe used in the analysis. The EPA estimates that the interim final rule will result in annualized compliance cost savings of \$0.4 million using a 3% social discount rate and \$0.5 million using a 7% social

discount rate. The EPA also estimates that the interim final rule will lead to HAP emissions increases of 120 tons from 2025 through 2027, when the provisions of the 2024 Final Rule are scheduled to go into effect. Changes to emissions from 2028 through 2035 are expected to be zero. The full benefit-cost analysis, which is contained in the RIA for this rulemaking, is consistent with Executive Order 12866 and is available in the docket.

TABLE 1—SUMMARY OF COMPLIANCE COST SAVINGS, AND EMISSIONS CHANGES FOR THE INTERIM FINAL RULE, DISCOUNTED TO 2025 (MILLIONS OF 2024 DOLLARS), 2025–2035

	3 Percent discount rate		7 Percent discount rate	
	PV	EAV	PV	EAV
Compliance Cost Savings	\$3.3	\$0.4	\$3.5	\$0.5
Emissions Increases	2025–2035			
HAP (Tons)				
	120			

Note: Estimates are rounded to two significant figures.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is considered an Executive Order 14192 deregulatory action. The EPA estimates that the interim final rule will result in compliance cost savings of \$3.3 million in present value (\$0.4 million EAV) using a 3% social discount rate and \$3.5 million in present value (\$0.5 million EAV) using a 7% social discount rate from 2025–2035. Details on the estimated compliance cost savings of this final rule can be found in EPA’s analysis of the potential costs and benefits associated with this action. This analysis is contained in the RIA, which is available in the docket.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. The OMB has previously approved the information collection activities that apply to the II&S facilities affected by this action and has assigned OMB control number 2060–0517. This action does not change the information collection requirements.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. The Agency confirmed through responses to a CAA section 114 information request that there are only eight integrated iron and steel manufacturing facilities currently

operating in the United States and that these plants are owned by two parent companies that do not meet the definition of small businesses, as defined by the U.S. Small Business Administration.

E. Unfunded Mandates Reform Act of 1995 (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This rule will implement revisions to the compliance dates for certain provisions. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. We have concluded that this action is not likely to have any adverse energy effects because it contains no regulatory requirements that will have an adverse impact on productivity, competition, or prices in the energy sector.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action does not involve technical standards.

K. Congressional Review Act (CRA)

This action is subject to the Congressional Review Act (CRA), 5

U.S.C. 801–808, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This rule has been determined to meet the criteria at 5 U.S.C. 804(2) and so would normally be subject to a 60-day delayed effective date under the CRA (5 U.S.C. 801(a)(3)). However, CRA allows the issuing agency to make such rules effective sooner if the agency makes a good cause finding that notice and comment rulemaking procedures are impracticable, unnecessary or contrary to the public interest (5 U.S.C. 808(2)). The EPA has made a good cause finding for this rule as discussed in Part III, including the basis for that finding.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart FFFFF—National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities

■ 2. Amend § 63.7783 by revising paragraph (g) and adding paragraph (h) to read as follows:

§ 63.7783 What do I have to comply with this subpart?

(g) If you have an affected source for which construction or reconstruction commenced on or before July 31, 2023, each sinter plant windbox, BF casthouse, BF stove, primary emission control system for a BOPF, and fugitive and intermittent particulate source at your facility must be in compliance with the applicable emission limits in table 1 to this subpart through performance testing under § 63.7825 and work practice standards in § 63.7793 by April 3, 2027.

(h) Affected sources that commence construction or reconstruction after July

31, 2023, must be in compliance with provisions in this subpart through performance testing by April 3, 2024 or upon startup, whichever is later.

■ 3. Amend § 63.7792 by revising paragraph (a) introductory text to read as follows:

§ 63.7792 What fenceline monitoring requirements must I meet?

* * * * *

(a) Beginning either 1 year after promulgation of the test method for fenceline sampling of metals applicable to this subpart or April 3, 2027, whichever is later, the owner or operator must conduct sampling along the facility property boundary and analyze the samples in accordance with the method and paragraphs (a)(1) through (3) of this section.

* * * * *

[FR Doc. 2025–12407 Filed 7–1–25; 11:15 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[EPA–HQ–OLEM–2024–0374, EPA–HQ–OLEM–2024–0375, EPA–HQ–OLEM–2024–0377; FRL–12162–02–OLEM]

National Priorities List

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA” or “the Act”), as amended, requires that the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”) include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants or contaminants throughout the United States. The National Priorities List (“NPL”) constitutes this list. The NPL is intended primarily to guide the Environmental Protection Agency (“the EPA” or “the agency”) in determining which sites warrant further investigation. These further investigations will allow the EPA to assess the nature and extent of public health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. This rule adds three sites to the General Superfund section of the NPL.

DATES: The rule is effective on August 4, 2025.

ADDRESSES: Contact information for the EPA Headquarters:

- Docket Coordinator, Headquarters; U.S. Environmental Protection Agency; CERCLA Docket Office; 1301 Constitution Avenue NW; William Jefferson Clinton Building West, Room 3334, Washington, DC 20004, telephone number: (202) 566–1744.

FOR FURTHER INFORMATION CONTACT:

Vanessa Van Note, U.S. Environmental Protection Agency, Site Assessment and Remedy Decisions Branch, Assessment and Remediation Division, Office of Superfund Remediation and Technology Innovation (Mail Code 5203T), 1200 Pennsylvania Avenue NW, Washington, DC 20460, telephone number: (202) 564–4830, email address: vannote.vanessa@epa.gov.

The contact information for the regional dockets is as follows:

- Mandy Liao, Region 1 (CT, ME, MA, NH, RI, VT), U.S. EPA, Superfund and Emergency Management Division, 5 Post Office Square, Suite 100, Boston, MA 02109–3912; telephone number: (617) 918–1036.

- James Desir, Region 2 (NJ, NY, PR, VI), U.S. EPA, 290 Broadway, New York, NY 10007–1866; telephone number: (212) 637–4342.

- Nancy Shannon, Region 3 (DE, DC, MD, PA, VA, WV), U.S. EPA, 4 Penn Center, 1600 John F. Kennedy Boulevard, Mail code 3SD12, Philadelphia, PA 19103; telephone number: (215) 814–3175.

- Sandra Bramble, Region 4 (AL, FL, GA, KY, MS, NC, SC, TN), U.S. EPA, 61 Forsyth Street SW, Mail code 9T25, Atlanta, GA 30303; telephone number: (404) 562–8926.

- Jessica Wheatley, Region 5 (IL, IN, MI, MN, OH, WI), U.S. EPA Superfund Records Officer, MI–10J, Metcalfe Federal Building, 77 West Jackson Boulevard, Chicago, IL 60604; telephone number: (312) 353–8559

- Steve Cowan, Region 6 (AR, LA, NM, OK, TX), U.S. EPA, 1201 Elm Street, Suite 500, Mail code SEDA, Dallas, TX 75270; telephone number: (214) 665–3149.

- Kumud Pyakuryal, Region 7 (IA, KS, MO, NE), U.S. EPA, 11201 Renner Blvd., Mail code SUPRSTAR, Lenexa, KS 66219; telephone number: (913) 551–7956.

- Ryan Dunham, Region 8 (CO, MT, ND, SD, UT, WY), U.S. EPA, 1595 Wynkoop Street, Mail code 8SEMD–EMB, Denver, CO 80202–1129; telephone number: (303) 312–6627.

- Leslie Ramirez, Region 9 (AZ, CA, HI, NV, AS, GU, MP), U.S. EPA, 75 Hawthorne Street, Mail code SFD–8–4, San Francisco, CA 94105; telephone number: (415) 972–3978.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2018-0794; FRL-6716.4-02-OAR]

RIN 2060-AW68

National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units: Final Repeal

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is finalizing the repeal of specific amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-Fired Electric Utility Steam Generating Units (EGUs), commonly referred to as the Mercury and Air Toxics Standards (MATS), that were promulgated on May 7, 2024. Specifically, the EPA is repealing the revised filterable particulate matter (fPM) emission standard, which serves as a surrogate for non-mercury hazardous air pollutant (HAP) metals for existing coal-fired EGUs; the revised fPM emission standard compliance demonstration requirements; and the revised mercury (Hg) emission standard for lignite-fired EGUs. The EPA is also making technical, non-substantive clarifications to electronic reporting requirements.

DATES: The final rule is effective on April 27, 2026. The Director of the Federal Register (FR) approved incorporation by reference (IBR) of certain publications listed in the rule on April 16, 2012 and May 30, 2023.

ADDRESSES: The EPA established a docket for this action under Docket ID No. EPA-HQ-OAR-2018-0794. All documents in the docket are available on the <https://www.regulations.gov> website. Although listed, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. The EPA does not place certain other material, such as copyrighted material, on the internet; this material is publicly available only as Portable Document Format (PDF) versions and accessible only on EPA computers in the docket office reading room. The public cannot download certain databases and physical items from the docket but may request these items by contacting the docket office by telephone at (202) 566-1744. The docket office has 10 business days to respond

to such requests. Except for these items, publicly available docket materials are available electronically at <https://www.regulations.gov> or on the EPA computers in the docket office reading room at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Time (ET), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact Christopher Werner, Industrial Processing and Power Division (IPPD) (D243-01), Office of Clean Air Programs (OCAP), U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5133; and email address: werner.christopher@epa.gov. Individuals who are deaf or hard of hearing, as well as individuals who have speech or communication disabilities, may use a telecommunications relay service. To learn more about how to make an accessible telephone call to any of the telephone numbers shown in this preamble, please visit the web page (<https://www.fcc.gov/trs>) for the relay service of the Federal Communications Commission, and a list of relay services is available on their directory page (<https://www.fcc.gov/general/trs-state-and-territories>).

SUPPLEMENTARY INFORMATION: *Preamble acronyms and abbreviations.* Throughout this notice the use of “we,” “us,” or “our” refers to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ACI activated carbon injection
 BLDS bag leak detection systems
 BTF beyond the floor
 Btu British thermal units
 CAA Clean Air Act
 CEMS continuous emission monitoring system(s)
 CFB circulating fluidized bed
 CFR Code of Federal Regulations
 CPMS continuous parametric monitoring system(s)
 CRA Congressional Review Act
 EAV equivalent annualized values
 ECMPS Emissions Collection and Monitoring Plan System
 EGU electric utility steam generating unit
 EIA U.S. Energy Information Administration

ESP electrostatic precipitator
 FF fabric filter
 FGD flue gas desulfurization
 fPM filterable particulate matter
 FR Federal Register
 GACT generally available control technologies
 GWh gigawatt-hour
 HAP hazardous air pollutant(s)
 HCl hydrogen chloride
 HF hydrogen fluoride
 Hg mercury
 HQ hazard quotient
 ICR Information Collection Request
 IGCC integrated gasification combined cycle
 IPPD Industrial Processing and Power Division
 IRA Inflation Reduction Act
 lb pounds
 LEE low emitting EGU
 MATS Mercury and Air Toxics Standards
 MMBtu million British thermal units of heat input
 MW megawatt
 NAICS North American Industry Classification System
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OCAP Office of Clean Air Programs
 OMB Office of Management and Budget
 PDF Portable Document Format
 PM particulate matter
 PM CEMS particulate matter continuous emission monitoring system(s)
 PRA Paperwork Reduction Act
 PV present values
 REL reference exposure level
 RFA Regulatory Flexibility Act
 RIA Regulatory Impact Analysis
 RIN Regulatory Information Number
 RTR residual risk and technology review
 SO₂ sulfur dioxide
 SO₃ sulfur trioxide
 TBtu trillion British thermal units of heat input
 TOSHI target organ-specific hazard index
 tpy tons per year
 UMRA Unfunded Mandates Reform Act
 XML Extensible Markup Language

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I. General Information

A. Executive Summary

In 2012, the EPA promulgated standards to address HAP emissions—including mercury, lead, arsenic, chromium, nickel, and cadmium, as well as hydrogen chloride from coal- and oil-fired EGUs (“2012 MATS Rule”).¹ Under CAA section 112, the EPA was required to review the standards within eight years to identify and address any residual risk to human health and the environment and, separately, to revise the standards as “necessary” in light of developments in practices, processes, and control technologies.² The Agency timely completed these reviews in 2020, finding, among other things, that the existing standards in the 2012 MATS Rule protected public health with an ample margin of safety and that further

changes to the standards were not “necessary” because there were no cost-effective developments in technology that supported revision (“2020 Final Rule”).³

Following a change in administration, however, an Executive Order instructed the EPA to reconsider and suspend, revise, or rescind the 2020 Final Rule if appropriate.⁴ On May 7, 2024, the EPA finalized several MATS amendments after initiating a rulemaking in response to the Executive Order (“2024 Final Rule”).⁵ In the 2024 Final Rule, the EPA confirmed that the 2020 risk review finding that the 2012 MATS Rule protected public health and the environment with an ample margin of safety as required by CAA section 112(f)(2) was correct.⁶ Nevertheless, upon reconsideration of the technology review under section 112(d)(6), the Agency established more stringent standards for the non-Hg metal HAP emissions and for fPM emissions (which serves as a surrogate for non-Hg metal HAP) from coal-fired EGUs and for mercury emissions from lignite-fired units and required all EGUs to install continuous emissions monitoring systems (CEMS) to monitor emissions of fPM, thereby removing existing compliance flexibilities in favor of a uniform, one-size-fits-all approach. The Agency reasoned that the revisions to MATS were warranted because “the size and unique nature of the coal-fired power sector” made the revisions “necessary,” but the revisions were based on relatively limited data concerning potential improvements in control technology and established despite the fact that the costs of the revisions were and are higher than anything the Agency has previously determined “necessary” pursuant to section 112(d)(6).⁷

On March 12, 2025, Administrator Zeldin announced that the Agency would reconsider the 2024 Final Rule.⁸ On June 17, 2025, the EPA undertook a review of the 2024 Final Rule and proposed to repeal most of its amendments (“2025 Proposal”).⁹ This action was consistent with several

Executive Orders and other Presidential Actions. In particular, Executive Order 14154, “Unleashing American Energy,” specifies that it is the policy of the United States to “protect the United States’s economic and national security and military preparedness by ensuring that an abundant supply of reliable energy is readily accessible in every State and territory of the Nation” and “to ensure that all regulatory requirements related to energy are grounded in clearly applicable law” (among other considerations).¹⁰ The Executive Order directed the heads of all agencies to review all existing regulations to identify agency actions that impose an undue burden on the identification, development, or use of domestic energy resources, with particular attention to oil, natural gas, coal, hydropower, biofuels, critical minerals, and nuclear energy resources. This Executive Order also directed agencies, consistent with applicable law, to suspend, revise, or rescind all agency actions identified as unduly burdensome and revoked Executive Order 13990. This Executive Order was followed by Executive Order 14179, “Removing Barriers to American Leadership in Artificial Intelligence;”¹¹ Executive Order 14192, “Unleashing Prosperity Through Deregulation;”¹² Executive Order 14262, “Strengthening the Reliability and Security of the United States Electric Grid;”¹³ and Executive Order 14261, “Reinvigorating America’s Beautiful Clean Coal Industry and Amending Executive Order 14241,”¹⁴ 90 FR 15517 (April 14, 2025).

In addition, on April 8, 2025, President Trump signed a Proclamation titled “Regulatory Relief for Certain Stationary Sources to Promote American Energy.”¹⁵ This Proclamation exempted certain stationary sources, identified in Annex 1 of the Proclamation, from compliance with the 2024 Final Rule pursuant to CAA section 112(i)(4).¹⁶ The President’s exemption is for a period of two years beyond the 2024 Final Rule’s compliance date (*i.e.*, for the period beginning July 8, 2027, and concluding July 8, 2029). Sources identified in Annex 1 will remain subject to the 2012 MATS Rule during the two-year extension period. Copies of the Presidential Proclamation and

³ 85 FR 31286 (May 22, 2020).

⁴ Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,” 86 FR 7037 (January 25, 2021), since rescinded by Executive Order 14148, “Initial Rescissions of Harmful Executive Orders and Actions,” 90 FR 8237 (January 28, 2025).

⁵ 89 FR 38508 (May 7, 2024).

⁶ *Id.* at 38518; see 88 FR 24866 (April 24, 2023) (proposed rule for the 2024 Final Rule).

⁷ 89 FR 38534 (May 7, 2024).

⁸ <https://www.epa.gov/newsreleases/epa-launches-biggest-deregulatory-action-us-history>.

⁹ 90 FR 25535 (June 17, 2025).

¹⁰ 90 FR 8353 (January 29, 2025).

¹¹ 90 FR 8741 (January 31, 2025).

¹² 90 FR 9065 (February 6, 2025).

¹³ 90 FR 15521 (April 14, 2025).

¹⁴ 90 FR 16777 (April 21, 2025).

¹⁵ “Regulatory Relief for Certain Stationary Sources to Further Promote American Energy” was issued on July 17, 2025, and added six sources to Annex 1. See 90 FR 34583 (July 23, 2025).

¹ 77 FR 9304 (February 16, 2012).

² CAA section 112(d)(6), (f)(2). CAA section 112 is codified at 42 U.S.C. 7412.

Annex 1 are available in the rulemaking docket.¹⁶

In the 2025 Proposal, the EPA proposed to repeal the three key amendments finalized in the 2024 Final Rule based on the EPA’s authority under CAA section 112 and the EPA’s authority to reconsider previous decisions taken under that authority to the extent permitted by law and supported by a reasoned explanation.¹⁷ The Agency noted that the proposed repeal was in accordance with the above-noted Executive Orders and solicited comment on whether the 2024 Final Rule had erred in evaluating cost-effectiveness and technical feasibility when deciding that revisions were “necessary.”¹⁸ In addition, the Agency sought comment on whether it should consider the potential for meaningful risk reduction when evaluating costs as part of determining whether revisions are “necessary” in a technology review.¹⁹

In this final rule, the EPA is repealing the following three MATS amendments from the 2024 Final Rule:

- The fPM emission standard for existing coal-fired EGUs, which the EPA revised from 0.030 pounds per million British thermal units (lb/MMBtu) to 0.010 lb/MMBtu;
- The compliance demonstration requirement for the fPM emission standard for all coal- and oil-fired EGUs, which the EPA revised from allowing EGU owners and operators to choose between use of quarterly stack testing, use of continuous parametric monitoring systems (CPMS), or use of PM continuous emission monitoring systems (CEMS) to allowing only the use of PM CEMS; and
- The Hg emission standard for existing lignite-fired EGUs, which the EPA revised from 4.0 pounds per trillion British thermal units (lb/TBtu) to 1.2 lb/TBtu.

The EPA has reevaluated the 2024 Final Rule and, after considering public comments, finds that the revisions to

the emissions standards were not “necessary” because they impose unwarranted compliance costs or raise potential technical feasibility concerns. With respect to the revised fPM emission standard, the EPA has two separate, and severable, bases for this finding. First, the EPA finds that the cost-effectiveness values associated with this standard (*i.e.*, the cost per mass of fPM or non-Hg HAP metal(s) reduced) are significantly higher than cost-effectiveness values that the Agency previously accepted in other technology reviews and related CAA section 112 actions for which cost is a factor. Unlike in the 2024 Final Rule, the Agency does not believe it is consistent with prior practice or reasonable to disregard such cost-effectiveness comparators and does not believe that differences between the EGU source category and other source categories justify establishment of a new high-cost benchmark for fPM as a surrogate for non-Hg metal HAP. Second, in undertaking review of the 2024 rule, the EPA also considered the Agency’s conclusion from the 2020 residual risk review, confirmed by the 2024 Final Rule, that there is little risk remaining from emissions of non-Hg HAP metals following the implementation of the emissions standards promulgated in the 2012 MATS Rule. For the reasons set forth later in this preamble, the Agency concludes that the low levels of remaining risk found in the prior residual risk review are relevant to the cost reasonableness of revised standards and therefore to whether it is “necessary” to promulgate revised standards that impose additional costs.

With respect to the requirement to utilize PM CEMS for compliance demonstrations, the EPA finds this requirement is an unnecessary expense for coal- and oil-fired EGUs and that owners and operators should retain the option of using other monitoring methods to demonstrate compliance

with the fPM emission standard. For the reasons set forth later in this preamble, mandating the use of PM CEMS and removing previously available compliance alternatives was not “necessary” pursuant to CAA section 112(d)(6). Furthermore, although the EPA in the 2024 Final Rule invoked CAA section 114(a)(1)(C) as offering additional authority for the PM CEMS requirement, that provision is equally applicable to the alternative compliance demonstration options restored in this final rule.

Finally, the EPA finds that the revised Hg emission standard for lignite-fired EGUs is not achievable given the broad range of boiler types and varying compositions of the different lignite fuels used at those facilities. As set forth later in this preamble, in light of this variability, the revised standard was based on insufficient data. As a result, the EPA finds that these revisions to the emission standards were not “necessary” under CAA section 112(d)(6), and is repealing them. As noted above, this action is consistent with Executive Order 14192, “Unleashing Prosperity Through Deregulation,”²⁰ Executive Order 14154, “Unleashing American Energy,”²¹ and Executive Order 14261, “Reinvigorating America’s Beautiful Clean Coal Industry and Amending Executive Order 14241,”²² among other recent Presidential actions.

The EPA estimates that this action will result in present value cost savings of \$670 million at a 3 percent discount rate and \$490 million at a 7 percent discount rate over the 2028 to 2037 timeframe, with total annualized cost savings of \$78 and \$69 million per year, respectively (in 2024 dollars).

B. Does this action apply to me?

Regulated entities. Table 1 of this preamble presents categories and entities that this action potentially regulates.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED by This Final Action

NESHAP and source category	NAICS ¹ code
Coal and oil-fired EGUs (40 CFR part 63, subpart UUUUU)	221112, 221122, 921150

¹ North American Industry Classification System (NAICS).

¹⁶ Document ID No. EPA–HQ–OAR–2018–0794–6980.
¹⁷ *FDA v. Wages & White Lion Invs., L.L.C.*, 604 U.S. 542, 568 (2025); *FCC v. Fox Television*

Stations, Inc., 556 U.S. 502, 515 (2009); *see also Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983).
¹⁸ 90 FR 25544–45 (June 17, 2025).

¹⁹ *Id.* at 25545.
²⁰ 90 FR 9065 (February 6, 2025).
²¹ 90 FR 8353 (January 29, 2025).
²² 90 FR 15517 (April 14, 2025).

The EPA does not intend Table 1 of this preamble to be exhaustive but rather to provide a guide for readers regarding the entities that this final action likely affects. To determine if this action affects your facility, you should examine the applicability criteria in title 40 of the Code of Federal Regulations (CFR), part 63, subpart UUUUU. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

C. Where can I get a copy of this document and other related information?

In addition to the docket, an electronic copy of this final rule is available on the internet. A brief summary of this rule is available at <https://www.regulations.gov>, Docket ID No. EPA-HQ-OAR-2018-0794. Following signature by the EPA Administrator, the EPA will post a copy of this rule at: <https://www.epa.gov/stationary-sources-air-pollution/mercury-and-air-toxics-standards>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

The changes to the regulatory text are being finalized in this rule. In addition, a redline strikeout memorandum showing the rule edits necessary to incorporate the changes to 40 CFR part 63, subpart UUUUU, finalized in this action is available in the docket. Following signature by the Administrator, the EPA also will post a copy of this preamble to <https://www.epa.gov/stationary-sources-air-pollution/mercury-and-air-toxics-standards>.

D. Judicial Review and Administrative Reconsideration

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (“D.C. Circuit”) by April 27, 2026. CAA section 307(b)(2) prohibits a party from challenging this final rule separately in any civil or criminal proceedings brought by the EPA for enforcement.

CAA section 307(d)(7)(B) further provides that only an objection to a rule or procedure that was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also requires the EPA to reconsider the rule if the person raising an objection can

demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

II. Background

A. What is the authority for this action?

1. What is the statutory authority for this action?

The statutory authority for this action is provided by CAA section 112, as amended (42 U.S.C. 7412). CAA section 112 establishes a multi-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards that reflect the maximum achievable control technology (MACT) or an appropriate alternative.²³ The second stage involves evaluating those standards within eight years under CAA section 112(f)(2) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions.²⁴ This second stage is commonly referred to as the “residual risk review.” In addition to the residual risk review, CAA section 112(d)(6) also requires the EPA to review the standards every eight years and “revise as necessary” taking into account “developments in practices, processes, and control technologies.”²⁵ This review is commonly referred to as the “technology review.” The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements.

In the first stage of the CAA section 112 standard-setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories

of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different requirements for major source standards and area source standards. The requirements for major sources are the relevant requirements for the present rulemaking. “Major sources” are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP.²⁶ For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of reduction in emissions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT “floor,” which is based on emission controls achieved in practice by a certain percentage of the best performing sources. The EPA also considers control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as “beyond-the-floor” standards.

The next stage in standard-setting focuses on identifying and addressing any remaining (*i.e.*, “residual”) risk within eight years pursuant to CAA section 112(f)(2) and concurrently conducting a technology review pursuant to CAA section 112(d)(6). This latter provision requires the EPA to review standards promulgated under CAA section 112 and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less often than every eight years. In conducting this review, which we call the “technology review,” the EPA is not required to recalculate the MACT floors that were established in earlier rulemakings.²⁷ The EPA considers cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

CAA section 112(d)(6) and relevant case law provide the EPA with flexibility to consider additional relevant factors other than those enumerated in section 112(d)(6) when deciding whether revisions to existing

²⁶ *Id.* 7412(a)(1).

²⁷ *Ass’n of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013); *Natural Resources Def. Council (NRDC) v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008).

²³ 42 U.S.C. 7412(d)(1)–(4).

²⁴ *Id.* 7412(f)(2).

²⁵ *Id.* 7412(d)(6).

standards are “necessary.” The D.C. Circuit has held that the CAA section 112(d)(6) requirement to periodically review and revise CAA section 112 emission standards “as necessary” is not limited to the consideration of “developments in practices, processes and control technologies.”²⁸ Rather, “the operative standard is ‘revise as necessary,’ with the parenthetical pointing to a non-exhaustive list of considerations.”²⁹ The Supreme Court also emphasized in *Michigan v. EPA* that unless the statute provides otherwise, broad terms such as “necessary” direct the relevant agency to consider all relevant factors, including by assessing the cost of an action relative to the anticipated benefits.³⁰ That decision is particularly relevant here because the Court was interpreting a related provision of CAA section 112 that instructs the Administrator to determine whether it is “appropriate and necessary” to regulate HAP emissions from EGUs.³¹ Thus, under relevant case law, when the EPA is deciding whether it is “necessary” to revise standards pursuant to CAA section 112(d)(6), the Agency can consider the costs of any developments in practices, processes, and control technologies.

The EPA is also finalizing that the results of a prior residual risk review under CAA section 112(f)(2) can be relevant under certain circumstances when evaluating whether it is “necessary” to revise standards under CAA section 112(d)(6). Specifically, as relevant here, where the remaining risk of cancer from the sources in this category is below 1-in-1 million, cost considerations bear additional weight in determining whether revised standards are “necessary” under CAA section 112(d)(6). In section III.A.2 of this preamble, we elaborate on this approach, including discussing its basis in CAA section 112 and its consistency with prior NESHAP technology reviews.

2. What is the authority for revisiting the 2024 Final Rule?

The EPA’s authority to revisit existing regulations under CAA section 112 is well-grounded in law. Specifically, the EPA has authority to reconsider, repeal, or revise past decisions to the extent permitted by law so long as the Agency

provides a reasoned explanation.³² This is true when, as is the case here, an agency reconsiders a prior regulation after a change in administration.³³ When permitted by the statutory scheme, “[a]gencies obviously have broad discretion to reconsider a regulation at any time.”³⁴

B. What is the coal- and oil-fired EGU source category, and how does the NESHAP regulate emissions from the source category?

The EPA promulgated the Mercury and Air Toxics Standards on February 16, 2012. The standards are codified at 40 CFR part 63, subpart UUUUU. Coal- and oil-fired EGUs are combustion units of more than 25 megawatts (MW) that serve a generator that produces electricity for sale and are located at both major and area sources of HAP emissions.³⁵ For coal-fired EGUs, the 2012 MATS Rule established standards to limit emissions of Hg, acid gas HAP (e.g., hydrogen chloride (HCl), hydrogen fluoride (HF)), non-Hg HAP metals (e.g., nickel, lead, chromium), and organic HAP (e.g., formaldehyde, dioxin/furan). Emission standards for HCl serve as a surrogate for all the acid gas HAP. For coal-fired EGUs with flue gas desulfurization (FGD), an alternate standard for sulfur dioxide (SO₂) may be used as a surrogate for all acid gas HAP if SO₂ CEMS are installed and operational. Standards for fPM serve as a surrogate for the non-Hg HAP metals, with total and individual HAP metals

standards provided as an alternative. The EPA chose fPM as a surrogate for non-Hg HAP metals because non-Hg HAP metals are predominantly a component of the filterable fraction of total PM (which is composed of a filterable and condensable fraction), and control of fPM emissions also results in control of emissions of non-Hg HAP metals.³⁶ Additionally, not all fuels emit the same type and amount of non-Hg HAP metals, but most generally emit fPM that includes some amount and combination of all the non-Hg HAP metals. Finally, using fPM as a surrogate eliminates the cost of performance testing to demonstrate compliance with numerous standards for individual non-Hg HAP metals.³⁷

In addition, the EPA established work practice standards to limit the formation and emissions of organic HAP. For oil-fired EGUs, the 2012 MATS Rule established standards to limit emissions of HCl and HF, total HAP metals (e.g., Hg, nickel, lead), and organic HAP (e.g., formaldehyde, dioxin/furan). Standards for fPM also serve as a surrogate for total HAP metals, with standards for total and individual HAP metals provided as alternative equivalent standards.

C. Summary of the 2020 Final Rule

The 2020 Final Rule included two separate decisions. First, the EPA responded to the Supreme Court’s remand in *Michigan* by concluding that it is not “appropriate and necessary” pursuant to CAA section 112(n)(1)(A) to regulate coal- and oil-fired EGUs under CAA section 112.³⁸ Second, the EPA completed the combined RTR for MATS due 8 years from the promulgation of the 2012 MATS Rule. As part of the RTR, the EPA conducted the residual risk review (“2020 Residual Risk Review”) pursuant to CAA section 112(f)(2), which requires the EPA to determine whether promulgation of additional standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. Also, the EPA conducted a technology review (“2020 Technology Review”) pursuant to CAA section 112(d)(6), which focused on identifying and evaluating developments in practices, processes, and control technologies that occurred

³⁶ Selenium may be present in the filterable PM or the condensable fraction as the acid gas, SeO₂.

³⁷ Document ID No. EPA-HQ-OAR-2009-0234.

³⁸ As noted below, in 2023, the EPA reversed its position from the 2020 Final Rule and concluded that regulation of coal- and oil-fired EGUs is “appropriate and necessary” under CAA section 112(n)(1)(A). 88 FR 13956 (March 6, 2023) (“2023 Final Rule”). In the present rulemaking, the EPA is not reconsidering the “appropriate and necessary” finding in the 2020 Final Rule or 2023 Final Rule.

²⁸ *La. Envtl. Action Network (LEAN) v. EPA*, 955 F.3d 1088, 1097 (D.C. Cir. 2020).

²⁹ *Id.*; see also *Nat’l Ass’n for Surface Finishing v. EPA*, 795 F.3d 1, 11 (D.C. Cir. 2015); *Ass’n of Battery Recyclers*, 716 F.3d at 673–74.

³⁰ 576 U.S. 743, 752–53 (2015).

³¹ See *id.* (interpreting 42 U.S.C. 7412(n)(1)(A)).

³² See, e.g., *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 42 (“[R]egulatory agencies do not establish rules of conduct to last forever [and] an agency must be given able latitude to adapt their rules and policies to . . . changing circumstances.”); see also *Clean Water Action v. EPA*, 936 F.3d 308, 313 (5th Cir. 2019) (“EPA correctly surmised that, in addition to its statutory authority to revise rules . . . administrative agencies possess the inherent authority to revise previously-promulgated rules, so long as they follow the proper administrative requirements and provide a reasoned basis for the agency decision.”).

³³ *Nat’l Ass’n of Home Builders v. EPA*, 682 F.3d 1032, 1038, 1043 (D.C. Cir. 2012) (explaining that an agency’s “reevaluation of which policy would be better in light of the facts” is “well within” its discretion and that a change in administration is a “perfectly reasonable basis for an executive agency’s reappraisal of the costs and benefits of its programs and regulations” (internal quotation marks omitted)). For this rulemaking, no commenters contested that the EPA has authority to reconsider a prior rule under CAA section 112(d)(6), although some argued that the EPA is impermissibly weakening a prior CAA section 112 rule.

³⁴ *Clean Air Council v. Pruitt*, 862 F.3d 1, 8–9 (D.C. Cir. 2017).

³⁵ A unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale is also an electric utility steam generating unit.

since promulgation of the 2012 MATS Rule to determine whether revisions to the standards were otherwise “necessary.”

The EPA presented the results of the 2020 Residual Risk Review, including the Agency’s decisions regarding risk acceptability, ample margin of safety, and adverse environmental effects, in

the 2020 Final Rule. Table 2 below summarizes the results of the risk assessment; more detail is available in the document entitled *Residual Risk Assessment for the Coal- and Oil-Fired EGU Source Category in Support of the 2020 Risk and Technology Review Final Rule*, which is available in the docket for this rulemaking.³⁹ The EPA found

the residual risk due to emissions of air toxics from this source category to be acceptable and determined that the 2012 MATS Rule provided an ample margin of safety to protect public health and prevent adverse environmental effects. Therefore, the EPA did not make any revisions to the 2012 MATS Rule to address residual risk.

TABLE 2—COAL- AND OIL-FIRED EGU INHALATION RISK ASSESSMENT RESULTS IN THE 2020 FINAL RULE
[85 FR 31286, May 22, 2020]

Number of facilities ¹	Maximum individual cancer risk (in 1 million) ²		Population at increased risk of cancer ≥1-in-1 million		Annual cancer incidence (cases per year)		Maximum chronic noncancer TOSHI ³		Maximum screening acute noncancer HQ ⁴
	Based on . . .		Based on . . .		Based on . . .		Based on . . .		Based on actual emissions level
	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	
322	9	10	193,000	636,000	0.04	0.1	0.2	0.4	HQ _{REL} = 0.09 (arsenic).

¹ Number of facilities evaluated in the risk analysis. At the time of the risk analysis there were an estimated 323 facilities in the coal- and oil-fired EGU source category; however, one facility is in Guam, which was beyond the geographic range of the model used to estimate risks. Therefore, the Guam facility was not modeled and the emissions for that facility were not included in the assessment.

² Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.

³ Maximum target organ-specific hazard index (TOSHI). The target organ systems with the highest TOSHI for the source category are respiratory and immunological.

⁴ The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of hazard quotient (HQ) values. HQ values shown use the lowest available acute threshold value, which in most cases is the reference exposure level (REL). When an HQ exceeds 1.0, we also show the HQ using the next lowest available acute dose-response value.

The 2020 Residual Risk Review also included more particularized risk determinations. As relevant here, these included determining that the maximum lifetime cancer risk from coal-fired EGUs ranged from 0.002-in-1 million to 0.3-in-1 million.⁴⁰

The 2020 Final Rule also presented the results of the 2020 Technology Review, which focused on identifying and evaluating developments in practices, processes, and control technologies that occurred since promulgation of the 2012 MATS Rule to determine whether revisions are “necessary” in light of all relevant considerations. Control technologies typically used to minimize emissions of pollutants that have numeric emission limits under the 2012 MATS Rule include electrostatic precipitators (ESPs) and fabric filters (FFs) for control of fPM as a surrogate for non-Hg HAP metals; wet scrubbers, dry scrubbers, and dry sorbent injection for control of acid gases (e.g., SO₂, HCl, and HF); and activated carbon injection (ACI) and other Hg-specific technologies for control of Hg. In the 2020 Technology Review, the EPA did not identify any developments in practices, processes, or

control technologies that would achieve further cost-effective emissions reductions and thus did not make any changes to the emission standards or other requirements in the 2012 MATS Rule. More information on the 2020 Technology Review is presented in the memorandum entitled *Technology Review for the Coal- and Oil-Fired EGU Source Category*, which is available in the docket for this rulemaking.⁴¹

D. Summary of the 2024 Review of the 2020 Final Rule

Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,” instructed the EPA to review the 2020 Final Rule and to consider publishing a notice of proposed rulemaking suspending, revising, or rescinding that action.⁴² The EPA reviewed the finding in the 2020 Final Rule that it was not appropriate and necessary to regulate coal- and oil-fired EGUs under CAA section 112 and, on February 9, 2022, proposed to find that it is appropriate and necessary to regulate coal- and oil-fired EGUs under CAA section 112.⁴³ The EPA made the affirmative finding on March 6, 2023.⁴⁴

On April 24, 2023, the EPA proposed the results of the Agency’s review of the RTR from the 2020 Final Rule.⁴⁵ In the 2023 proposed rule, the EPA noted the conclusions from the 2020 Residual Risk Review, as shown in Table 2 of this preamble, including the finding that residual risk due to emissions of air toxics from this source category was acceptable and that the 2012 MATS Rule provided an ample margin of safety to protect public health and prevent adverse environmental effects. Further, the EPA explained that it had “review[ed] the 2020 residual risk analysis, [and] . . . determined that the risk analysis was rigorous, robust, and conducted using approaches and methodologies that are consistent with those that have been utilized in residual risk analyses and reviews for other industrial sectors.”⁴⁶ For these reasons, the EPA did not reopen the 2020 Residual Risk Review and did not propose changes to any emissions standards or other requirements for the purpose of addressing the remaining risk.⁴⁷

The EPA’s review of the 2020 Technology Review included evaluating the technology review⁴⁸ and focused on

³⁹ Document ID No. EPA–HQ–OAR–2018–0794–4553.

⁴⁰ *Residual Risk Assessment for the Coal- and Oil-Fired EGU Source Category in Support of the 2020 Risk and Technology Review Final Rule*. This report is referred to as the 2020 Residual Risk Review throughout the preamble.

⁴¹ Document ID No. EPA–HQ–OAR–2018–0794–0015.

⁴² 86 FR 7037 (January 25, 2021), rescinded by Executive Order 14148, “Initial Rescissions of Harmful Executive Orders and Actions,” 90 FR 8237 (January 28, 2025).

⁴³ 87 FR 7624 (February 9, 2022).

⁴⁴ 88 FR 13956 (March 6, 2023).

⁴⁵ 88 FR 24854 (April 24, 2023).

⁴⁶ *Id.* at 24866.

⁴⁷ *Id.*

⁴⁸ Described in Document ID No. EPA–HQ–OAR–2018–0794–0015.

the identification of any developments in practices, processes, and control technologies that have occurred since the finalization of the 2012 MATS Rule and since publishing the 2020 Technology Review. Based on that review, the EPA concluded that revisions to certain standards were warranted and proposed three changes. First, the EPA proposed to revise the existing coal-fired EGU fPM emissions standard, which is a surrogate for non-Hg HAP metals, from 0.030 lb/MMBtu to 0.010 lb/MMBtu, and proposed corresponding reductions in the alternative emission standards for total and individual non-Hg HAP metals. Second, the EPA proposed to require that all coal- and oil-fired EGUs demonstrate compliance with the applicable fPM emission standard exclusively by using PM CEMS, and to remove the option of using alternative compliance demonstrations. Third, the EPA proposed to revise the Hg emission standard for lignite-fired EGUs from 4.0 lb/TBtu to 1.2 lb/TBtu with an alternative output-based standard of 0.013 lb/gigawatt-hour (GWh). All proposed changes were ultimately promulgated in the 2024 Final Rule.⁴⁹

In the 2024 Final Rule, the EPA established a substantially more stringent fPM emission standard, which serves as a surrogate for the non-Hg HAP metals. The fPM standard was lowered from 0.030 lb/MMBtu to 0.010 lb/MMBtu for all existing coal-fired EGUs. The 2024 Final Rule also proportionally lowered the individual and total non-Hg HAP metal emission limits.

In the 2024 Final Rule, the EPA revised its conclusion in the 2020 Final Rule by finding that there were developments in practices, processes, and control technologies to reduce fPM emissions, that the costs to comply with the more stringent fPM standard based on these developments were reasonable, and in light of those considerations, that the revised standard was “necessary.” The EPA stated that it had considered costs in several ways, including cost

effectiveness, the total capital costs of proposed measures, annual costs, and costs compared to total revenues. In addition, in the 2024 Final Rule, the EPA found that most existing coal-fired EGUs had reporting fPM levels that were below the 2012 MATS Rule 0.030 lb/MMBtu emission limit and that costs were lower than estimated during promulgation of the 2012 MATS Rule fPM emission limit.⁵⁰

E. Summary of the 2025 Proposed Repeal

On June 17, 2025, the EPA proposed to repeal the amendments to MATS in the 2024 Final Rule.⁵¹ Based on our reevaluation of the 2024 Final Rule, we proposed to repeal the fPM emission standard for all existing coal-fired EGUs of 0.010 lb/MMBtu, the requirement for all coal- and oil-fired EGUs to demonstrate compliance with the fPM emission standard by using PM CEMS, and the Hg emission standard for lignite-fired EGUs of 1.2 lb/TBtu. The Agency proposed to find that the cost-effectiveness values associated with the revised fPM emission standard are significantly higher than cost-effectiveness values that we previously rejected in other technology reviews and related actions under CAA section 112. The EPA also proposed to find that the requirement utilizing PM CEMS for compliance demonstration was an unnecessary expense for coal- and oil-fired EGUs and that the owners and operators of such sources should maintain the option to utilize other monitoring methods to demonstrate compliance with the fPM emission standard. Lastly, the EPA proposed to find that the Agency failed to demonstrate that the revised Hg emission standard for lignite-fired EGUs is achievable across the broad range of boiler types and varying compositions of the different lignite fuels. The Agency also took comment on whether we should consider the potential for meaningful risk reduction when weighing costs to determine if it is necessary to revise standards in a CAA section 112(d)(6) technology review.

III. Basis for Final Repeal of the 2024 Final Rule

In this section, the EPA describes what aspects of the proposal the Agency is finalizing, a summary of key comments and responses, and the rationale for each final decision. For all

comments not discussed in this preamble, comment excerpts and the EPA’s responses are available in the comment summary and response document entitled *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units, Repeal of Amendments, Summary of Public Comments and Responses on Proposed Rule*, available in the docket for this rulemaking.⁵²

Because this final rule repeals three requirements of the 2024 Final Rule—revisions to the emissions standards for fPM as a surrogate for non-Hg HAP metals for existing coal-fired EGUs, the fPM emission standard compliance demonstration requirements, and the Hg emission standard for lignite-fired EGUs—the EPA intends the repeal of each requirement to be severable from one another. Just as each requirement added in the 2024 Final Rule addressed distinct aspects of MATS and employed a distinct rationale, so also is the EPA finalizing the repeal of each requirement for separate and independent reasons. When the EPA adopted these three requirements in the 2024 Final Rule, the EPA explained that each of the three requirements were severable from each other as each is “multifaceted and addresses several distinct aspects of MATS for independent reasons.”⁵³ By the same token, the repeal of each of requirement is severable from the repeal of the remaining requirements.

The EPA intends that the various components of this final rule operate independently of the other and be considered independently. For example, the EPA notes that our justifications for repealing the revised fPM standard as a surrogate for non-Hg HAP metals (and related revised standards for each non-Hg HAP metal) are rooted in the poor cost-effectiveness of the controls, while our justifications for repealing the requirements for lignite-fired EGUs to meet the same standard for Hg emissions as other coal- and oil-fired EGUs rest on a separate analysis specific to the variability of lignite-fired units and lack of sufficient data. Similarly, our justifications for repealing the changes to the fPM compliance demonstration requirement are based on the cost of CEMS and the determination that it is not necessary to make CEMS the exclusive means of demonstrating compliance to further transparency and informational values.

Each of these actions is independent from each other. In particular, the repeal of the revised emission standard for fPM

⁴⁹ In the 2024 Final Rule, the EPA also removed paragraph (2) of the definition of “startup” in 40 CFR 63.10042. See 89 FR 38550 (May 7, 2024). The regulation now requires that all EGUs use the work practice standards in paragraph (1) of the definition of “startup” in 40 CFR 63.10042, which was already being used by virtually all affected EGUs. The EPA made this revision in response to *Chesapeake Climate Action Network v. EPA*, 952 F.3d 310 (D.C. Cir. 2020), in which the D.C. Circuit remanded the alternative “startup” work practice standard in paragraph (2) to the EPA for reconsideration. The compliance deadline for the changes to the “startup” definition was January 2, 2025. The EPA did not propose amendments to this aspect of the 2024 Final Rule and is not finalizing any changes to the “startup” definition at this time.

⁵⁰ For instance, the EPA found at the time that the median fPM rate of the 296 coal-fired EGUs assessed in the 2024 Final Rule was 0.004 lb/MMBtu, or 60 percent below the revised fPM limit of 0.010 lb/MMBtu. See 89 FR 38522 (May 7, 2024).

⁵¹ 90 FR 25535 (June 17, 2025).

⁵² Docket ID No. EPA-HQ-OAR-2018-0794.

⁵³ 90 FR 38518 (May 7, 2024).

as a surrogate for non-Hg HAP metals (and related revised standards for each non-Hg HAP metal) and the repeal of the fPM compliance demonstration requirement to utilize PM CEMS are independent and based on separate rationales. While the EPA considered the technical feasibility of PM CEMS in establishing the revised fPM standard, the EPA finds there are independent reasons for repealing each requirement, as just noted. If the EPA were to repeal any one or two of the three requirements, but not the other one or two, each repeal would reinstate requirements from the 2012 MATS Rule that continue to be workable without the other one or two revisions in place.

Accordingly, the EPA finds that the repeal of each set of revised standards and requirements is severable from the repeal of the other revised standards and requirements. Thus, the EPA has independently considered and adopted each portion of this final rule, which includes the repeal of the revised fPM emission standard as a surrogate for non-Hg HAP metals (and related revised standards for each non-Hg HAP metal), the repeal of the fPM compliance demonstration requirement, and the repeal of the revised Hg emission standard for lignite-fired units, and each is severable should there be judicial review. If a court were to invalidate any one of these elements of the final rule, the EPA intends the remainder of this action to remain effective. Importantly, the EPA designed the different elements of this final rule to function sensibly and independently. Further, the supporting bases for each element of the final rule reflect the Agency's judgment that the element is independently justified and appropriate, and that each element can function independently even if one or more other parts of the rule has been set aside.

A. Filterable PM Emission Standard for Existing Coal-Fired EGUs

1. What is the EPA finalizing for the filterable PM emission standard for existing coal-fired EGUs?

The EPA proposed repealing the lower fPM limit of 0.010 lb/MMBtu for existing coal-fired EGUs based on a determination that the cost of the revision to the standard are unreasonable, and thus, not "necessary" as required by CAA section 112(d)(6). The EPA also proposed to revert the corresponding total and individual HAP metal emission standards to the limits that were promulgated in the 2012 MATS Rule if the repeal of the more stringent fPM limit were finalized. The EPA solicited comment on whether the

cost-effectiveness rationale used to justify the revised fPM emission standard is consistent with the Agency's prior CAA section 112(d)(6) technology review determinations (Question #1) and on whether there are other cost-effective and achievable alternative standards that the EPA should consider as an alternative to a standalone repeal of the 0.010 lb/MMBtu fPM emission standard (Question #2). The EPA also took comment on whether risk should be a factor that the Agency considers when conducting technology reviews and if so, how.

The EPA is finalizing its proposal to repeal the more stringent fPM emission standard and the corresponding total and individual non-Hg HAP metal standards that were promulgated in the 2024 Final Rule and to revert to the limits set in the 2012 MATS Rule, which reduce risk to acceptable levels and provide an ample margin of safety. Commenters provided both supportive and opposing arguments for issues regarding the fPM emission standard. Neither these comments nor the Agency's updated analyses altered the EPA's views of the conclusions proposed or required changes to the proposed regulatory language.

2. What is the rationale for the EPA's final decision to repeal the filterable PM standard for existing coal-fired EGUs?

In this final rule, the EPA is repealing the lower fPM standard of 0.010 lb/MMBtu for existing coal-fired EGUs that the EPA established in the 2024 Final Rule, as well as the alternative total and individual non-Hg HAP metal limits and returning all of them to the emissions standards promulgated in the 2012 MATS Rule. As discussed in this section, the EPA determines upon further review that the cost-effectiveness of the revised standards is not reasonable and compares unfavorably to prior Agency decisions on cost-reasonableness across other technology reviews and other section 112 actions where costs are considered. In addition, after reviewing the comments the EPA received concerning the consideration of risk in the context of a CAA section 112(d)(6) review, the Agency concludes that the results of the residual risk review may be considered when evaluating whether revisions to the emission standards are cost-reasonable and therefore "necessary" under CAA section 112(d)(6). As explained further in section III.A of this preamble, the EPA finds that it is appropriate to consider the conclusions of the section 112(f)(2) risk review in all subsequent section 112(d)(6) reviews. For a risk review, the Agency determines the risk

remaining from HAP emissions from every source in a source category, and the statute includes specific risk thresholds for remaining cancer risk. Specifically, the statute incorporates a rebuttable presumption that a cancer risk above 100 in 1 million is unacceptable⁵⁴ and establishes an aspirational goal of using standards to reduce cancer risk for each source in a category to no greater than one in one million.⁵⁵ The Agency finds that the results of the residual risk review can be considered in technical reviews going forward to inform the potential for meaningful risk reduction when evaluating cost.

In this case, the MACT standard for non-Hg HAP metals in the 2012 MATS Rule lowered the maximum individual lifetime cancer risk (cancer MIR) from such HAP metals to below one-in-one million for every coal-fired EGU in the country, thereby achieving the aspirational goal of CAA section 112(f)(2)(A). In such cases, the EPA now concludes that a greater emphasis on cost is warranted in light of the low potential for further risk reduction, and that additional controls would generally only be "necessary" when the costs are on the lower end of what has been found acceptable from a cost perspective in prior CAA section 112 actions. For emissions of non-Hg HAP metals from coal-fired EGUs, in light of the high cost of the controls, a common metric the EPA considers in CAA section 112(d)(6) technology reviews, and the low remaining risk of cancer from these emissions, the Agency concludes that the 2024 revisions are not necessary. The EPA views each of the rationales set out in this section—a change of views on cost reasonableness of the additional controls evaluated in the 2024 Final Rule and the additional consideration of the low remaining risk for this source category—as separate and independent bases for repeal, either one of which would lead the Agency to conclude that the revised standards in the 2024 Final Rule were not "necessary" under CAA section 112(d)(6).

As the EPA noted in the 2024 Final Rule, the Agency considers costs in various ways depending on the rule and

⁵⁴ See CAA section 112(f)(2)(B), 42 U.S.C. 7412(f)(2)(B) (preserving the EPA's approach in the Benzene NESHA, under which cancer risk above 100 in 1 million is presumptively unacceptable unless the presumption is overcome on a category-specific basis).

⁵⁵ See CAA section 112(f)(2)(A), 42 U.S.C. 7412(f)(2)(A) (requiring the EPA to promulgate standards if the cancer risk to the most exposed individual exceeds one-in-one million eight years after the EPA established MACT standards for the source category).

the affected sector. For example, the EPA has considered the cost effectiveness of controls in the vast majority of CAA section 112 rulemakings where costs are considered, and the Agency has also considered total capital costs of control measures, annual compliance costs, and the compliance costs compared to total revenues (*e.g.*, cost-to-revenue ratios). In the 2024 Final Rule and, by the same token, in this rule, the most important indicator of cost is cost effectiveness, which is the relationship of costs to emission reductions, because that indicator sheds the most light on whether the revised emissions standard that is based on those controls is “necessary” under CAA section 112(d)(6). As the EPA acknowledged in the 2024 Final Rule, the cost-effectiveness ratio of the revised 0.010 lb/MMBtu fPM standard was significantly higher than cost-effectiveness ratios the EPA rejected in past technology reviews conducted under CAA section 112(d)(6) for other source categories.⁵⁶ Moreover, the cost effectiveness values for the specific non-Hg HAP metals (*i.e.*, the metals for which fPM serves as a surrogate)

emitted from EGUs are almost an order of magnitude higher than the highest values accepted for such HAP metals under CAA section 112(d)(6) reviews for other source categories. *See* section III.A.3 of this preamble, below, for a more detailed discussion. The EPA now finds that the costs for this source category to achieve the revised standard, in relation to the amount of emission reductions, are unreasonable, such that the revised standard is not “necessary” under CAA section 112(d)(6). As noted below, the EPA also finds that the limited risk posed by emissions from coal-fired power plants, coupled with the high cost-effectiveness values, are a separate and additional reason for its determination that the revised standard is not “necessary” under CAA section 112(d)(6). In the 2024 Final Rule, the EPA estimated the cost effectiveness for EGUs that were reporting average fPM rates above the 0.010 lb/MMBtu fPM emission standard to be \$10.5 million per ton of non-Hg HAP metals and \$34,500 per ton of fPM (2019\$). The EPA has since revised these cost effectiveness estimates based on updated expectations regarding the existing coal-fired EGU fleet, reflecting

fewer planned retirements. Table 3 of this preamble summarizes the updated cost effectiveness of the more stringent fPM emission standard. For the purpose of estimating cost effectiveness, the analysis presented in this table is based on the observed emission rates of all existing coal-fired EGUs except those with retirements reported to the U.S. Energy Information Administration (EIA) via EIA Form 860.⁵⁷ The analysis presented in Table 3 estimated the costs associated for each unit to upgrade its existing PM controls to meet a fPM emission standard of 0.010 lb/MMBtu, using the same methodology as the 2024 Final Rule. In the cases where existing PM controls would not achieve the necessary reductions, unit-specific FF installation costs were estimated.⁵⁸ Based on this updated analysis, total annual costs are estimated to be approximately \$93.7 million with a cost effectiveness of \$11.1 million per ton of non-Hg HAP metals, and \$36,502 per ton of fPM, for the 0.010 lb/MMBtu fPM emission standard, which is about 5 percent higher than the 2024 Final Rule estimated. Table 3—Summary of Revised Cost Effectiveness Analysis for the

UPDATED FPM EMISSION LIMIT
(*i.e.*, 0.010 lb/MMBtu)

	2025 Final Repeal Rule
Number of Affected Units (Capacity, GW)	37 (16.8)
Annual Cost, (\$M, 2019 dollars)	93.7
fPM Reductions (tpy)	2,567
Total Non-Hg HAP Metals Reductions (tpy)	8.4
Total Non-Hg HAP Metals Cost Effectiveness (\$M/ton)	11.1
Total Non-Hg HAP Metals Cost Effectiveness (\$/lb)	5,600

Upon reconsideration, the EPA is finalizing the repeal of the more stringent fPM standard and corresponding total and individual HAP metal standards promulgated in the 2024 Final Rule because the cost effectiveness of the revised standard is inconsistent with that of the EPA’s prior technology review determinations. In the 2024 Final Rule, the EPA asserted that differences between the power sector and the other source categories subject to previous technology reviews justified accepting an unusually high cost-effectiveness ratio. Upon further

review, the Agency no longer believes the unique nature of the utility power industry supports the decision to revise the fPM standard for coal-fired EGU’s. In particular, the EPA stated in the 2024 Final Rule that the large size of the power sector relative to other industrial sectors meant that the amount of its emissions were relatively greater than other source categories.⁵⁹ The EPA added that the size of the sector also includes relatively large revenues, which the Agency believed at the time further justified the control costs.⁶⁰ The EPA also stated in the 2024 Final Rule

that because of the emission rates already achieved by most of the coal-fired EGUs in the source category, the costs of complying with the revised standard would be borne by only some of the sources in the source category.⁶¹ On that basis, the EPA asserted that the controls would not have “significant effects” on the industry, *i.e.*, the power sector.⁶² Finally, the EPA claimed that the cost effectiveness of the controls should be considered in light of these characteristics of the source category, which distinguish it from other source

⁵⁶ 89 FR 38533–34 (May 7, 2024). These rules are also noted in section III.A.3 of this preamble.
⁵⁷ This is described in detail in the 2023 Technical Memo, 2024 Technical Memo, and the 2025 Update to the 2024 Technology Review for the Coal- and Oil-Fired EGU Source Category memorandum (“2025 Technical Memo”) available

in the rulemaking docket (Docket ID No. EPA–HQ–OAR–2018–0794).
⁵⁸ Note that unlike the cost projections presented in the Regulatory Impact Analysis (RIA), the updated estimates do not account for the two-year compliance extensions for units listed on Annex 1 of the Presidential Proclamation or any future

changes in the composition of the operational coal-fired EGU fleet that may occur by 2028 as a result of other factors affecting the power sector.
⁵⁹ 90 FR 38524 (May 7, 2024).
⁶⁰ *Id.* at 38534.
⁶¹ *Id.*
⁶² *Id.* at 38524.

categories that the EPA has regulated under CAA section 112.⁶³

The EPA now believes that it was inappropriate to rely on the differences between the EGU sector and other sectors with respect to consideration of costs in the development of standards. The EPA has consistently maintained that the statute treats the EGU source category the same as all other major source categories with respect to regulation under CAA section 112(d) once the Agency decides pursuant to CAA section 112(n)(1)(A) to add the EGU source category to the list of regulated major sources under CAA section 112(c)(1).⁶⁴ In the 2024 Final Rule, however, the Agency ignored that position and used certain unique factors about the power sector in an attempt to justify otherwise unreasonable costs. Specifically, the Agency no longer believes it was reasonable to establish a fPM standard with one of the highest cost-effectiveness values ever accepted for fPM under CAA section 112(d)(6), particularly when the cost-effectiveness ratio for the actual non-Hg HAP metal emissions was approximately an order of magnitude higher than any cost-effectiveness value the Agency has ever found reasonable for non-Hg HAP metals. The longstanding use of fPM as a surrogate for non-Hg HAP metals does not excuse the Agency from considering cost-effectiveness as to the non-Hg HAP metals themselves. The purpose of CAA section 112 is to regulate HAP emissions, and when there exists a disparity in cost effectiveness between a surrogate and the associated HAP, it is important to give sufficient consideration to that disparity, but the Agency failed to do so in the 2024 Final Rule. Thus, although the Agency identified what it considered at the time to be “developments” in some control strategies in the 2024 Final Rule, the costs for the power sector to implement those developments are not reasonable, such that the revised standards are not “necessary” under CAA section 112(d)(6). As a result of this final rule, the fPM and corresponding total and

individual non-Hg HAP metal emission standards will revert to the standards that were promulgated in the 2012 MATS Rule (e.g., 0.030 lb/MMBtu for fPM and associated prior standards for non-Hg HAP metals).

In addition to finding that the costs are unreasonable on their face, circumstances have changed materially since promulgation of the 2024 Final Rule. Fewer coal-fired EGUs are likely to retire instead of complying with MATS because of an increasing need for electricity generation, including to support growing demand from the technology sector. Moreover, Congress recently passed, and President Trump signed into law, new legislation that repealed, amended, or defunded relevant provisions of the Inflation Reduction Act (IRA), including tax credits for solar and wind generation that the EPA cited in the 2024 Final Rule to predict an “accelerated” transition away from coal- and oil-fired generation.⁶⁵ Coupled with the Executive Orders discussed earlier in this preamble that establish different policies and programs to promote power generation from this source category, the EPA’s prior predictions about the future of the power sector and conclusion that the unique characteristics of the power sector support a finding that the additional controls are “necessary” are no longer accurate.⁶⁶ Instead, that unique character of the power sector and the increasing demand supports this repeal because any unnecessary downward pressure on the power industry at this time is not in the national interest or in the interest of consumers.

The EPA’s decision to repeal these standards from the 2024 Final Rule is further supported by the low remaining cancer risk attributed to HAP emissions

from this source category. As noted in section II.A.1 of this preamble and discussed in greater detail in section IV of this preamble, CAA section 112(d)(6) and relevant case law support considering additional factors beyond developments in technology when deciding whether revisions to existing standards are “necessary,” including cost. Considering risk in the context of the first technology review would be duplicative of the one-time risk review requirement, which is conducted at the same time and which generally includes an ample-margin-of-safety analysis that takes the costs of controls into account. However, Congress did include risk benchmarks in CAA section 112(f), and considering those benchmarks in subsequent technology reviews is consistent with the broad scope of the term “necessary” and reasonable because that information is part of the overall CAA section 112 record for each source category. Specifically, CAA section 112(f)(2)(A) directs the EPA to “promulgate standards” if the cancer risk to the most exposed individual is greater than one-in-one million.⁶⁷ Additionally, CAA section 112(f)(2)(B) incorporates the Benzene NESHAP approach, which generally presumes that a cancer risk of greater than 1-in-10,000 is unacceptable unless such presumption is overcome.⁶⁸

The decision to consider the low remaining risk in the prior residual risk assessment in assessing the need for additional standards in the second and subsequent CAA section 112(d)(6) reviews is consistent with the ordinary meaning of the term “necessary,” which is “required,” “compulsory,” or “determined or produced by the previous condition of things.”⁶⁹ CAA section 112(d)(6), by its terms, expressly requires the EPA to consider “developments in practices, processes, and control technologies” when determining whether it is “necessary” to revise existing section 112 standards (e.g., standards based on the MACT floor, a beyond-the-floor level of control, or a risk review). The EPA also considers the costs of potential revisions even though CAA section 112(d)(6) does not explicitly reference cost. The D.C. Circuit has upheld that interpretation,⁷⁰ and it is consistent with the Supreme Court’s interpretation of the term “appropriate and necessary” in another

⁶⁵ Compare 89 FR 38534 (May 7, 2024) (citing Pub. L. 117–169 (2022)), with Pub. L. 119–21 (2025).

⁶⁶ The EPA further clarifies that statements in the 2024 Final Rule regarding planned EGU retirements “due to factors independent of the EPA’s regulation” were overbroad and did not reflect a detailed, source-by-source analysis of the costs of regulation. See, e.g., 89 FR 38524–25 (May 7, 2024). In several recent cases, the Supreme Court has vacated EPA rules for misusing statutory authority and failing to consider the costs of regulation. See *West Virginia v. EPA*, 597 U.S. 697 (2022) (vacating CAA section 111(d) standards for pursuing generation shifting in violation of the major questions doctrine); *Michigan*, 576 U.S. at 749–50 (faulting the EPA’s decision to regulate EGUs under CAA section 112 for failing to account for an estimated \$9.6 billion in annual compliance costs). Although trends in a source category can be relevant under CAA section 112(d)(6), the inherent difficulty in determining whether a planned retirement is independent of regulatory pressure cautions against making such an assumption for regulatory purposes absent more direct engagement with and analysis of each source.

⁶³ *Id.*

⁶⁴ After the EPA makes the “appropriate and necessary” finding for the EGU source category required in CAA section 112(n)(1)(A), the EGU source category becomes included in the “list of all categories and subcategories of major sources” in CAA subsection 112(c)(1). 42 U.S.C. 7412(c)(1), (n)(1)(A). That listing, in turn, triggers the same, general regulatory requirements for the EGU source category as apply to the other listed source categories, under CAA section 112. See, e.g., 42 U.S.C. 7412(c)(2); 88 FR 13956, 13960–61 (March 6, 2023) (recounting the EPA’s position since 2000 that an affirmative “appropriate and necessary” finding puts the EGU source category in the same position as all source categories listed in CAA section 112(c)(1)).

⁶⁷ 42 U.S.C. 7412(f)(2)(A).

⁶⁸ *Id.* 7412(f)(2)(B).

⁶⁹ Webster’s Ninth New Collegiate Dictionary 790 (1984).

⁷⁰ *Ass’n of Battery Recyclers*, 716 F.3d at 673–74.

provision of CAA section 112.⁷¹ As with costs, the EPA interprets CAA section 112(d)(6) to authorize the EPA to take the low remaining risk identified in the prior residual risk review into account even though the provision does not explicitly refer to health risks. When the Agency has previously determined that residual risk for a source category is consistent with Congress' risk-reduction goals, that relatively low risk is relevant to determining whether additional standards are "necessary" and, if so, which standards are "necessary." That follows from the overall purpose of CAA section 112, which is to promote public health by reducing the hazards presented by the emission of air toxics, and from Congress' decision to establish and adopt the particular risk thresholds in the statute described above.

This interpretation is consistent with how the EPA has interpreted "necessary" under CAA section 112(n)(1)(A) by taking into consideration health risks. The Supreme Court explained the provisions of CAA section 112(n)(1)(A), including their background and context, in *Michigan v. EPA*, as follows:

[T]he Clean Air Act Amendments of 1990 subjected power plants to various regulatory requirements. . . . [T]hese requirements were expected to have the collateral effect of reducing power plants' emissions of hazardous air pollutants, although the extent of the reduction was unclear. Congress directed the Agency to "perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by [power plants] of [hazardous air pollutants] after imposition of the requirements of this chapter." If the Agency "finds . . . regulation is appropriate and necessary after considering the results of the study," it "shall regulate [power plants] under [CAA section 112]."⁷²

The Court went on to explain, with approval, the EPA's interpretation of "necessary," which, as noted, takes into consideration health risks:

In 2012, [the EPA] reaffirmed [its prior] appropriate-and-necessary finding. . . . The Agency found regulation "appropriate" because (1) power plants' emissions of mercury and other hazardous air pollutants posed risks to human health and the environment and (2) controls were available to reduce these emissions. It found regulation "necessary" because the imposition of the Act's other requirements did not eliminate these risks.⁷³

Interpreting "necessary" to authorize consideration of the prior residual risk review in the way described in this

preamble is also consistent with CAA section 112(d)(6)'s direction to revise "emission standards promulgated under this section." Specifically, after the EPA conducts the mandatory section 112(f)(2) residual risk review, subsequent section 112(d)(6) technology reviews will include a review and potential revision of all section 112 standards.⁷⁴ Considering the findings of the prior risk review, which are part of the record before the Agency, during those technology reviews is reasonable and accounts for CAA section 112's purpose of protecting public health.

The approach that the EPA is taking in this rulemaking, *i.e.*, considering the low residual risk findings from the 2020 Residual Risk Review, marks a change from the Agency's stated approach in the 2024 Final Rule, in which the Agency declined to consider the health-risk findings from the 2020 Residual Risk Review as part of the technology review. Specifically, the EPA stated that it was "not compel[led]" to "consider[] risks as a factor" in technology reviews under CAA section 112(d)(6).⁷⁵ The EPA explained that the CAA section 112(d)(6) technology review and the section 112(f) residual risk determination were "independent" of each other, and that "a determination under section 112(f) of an ample margin of safety and no adverse environmental effects alone will [not] . . . cause us to determine that a revision is not necessary under CAA section 112(d)(6)."⁷⁶

However, in the 2024 Final Rule, the EPA did not say that CAA section 112 precludes the Agency from considering risks in connection with a CAA section 112(d)(6) technology review. Moreover, the EPA acknowledged that in some prior section 112(d)(6) reviews, the Agency has considered risks.⁷⁷

For all of these reasons, the EPA concludes that it is reasonable to consider the low remaining risks identified in a prior residual risk review—particularly where, as here, such risks are consistent with the thresholds Congress set out or adopted by statute—when determining in a second and subsequent CAA section 112(d)(6) review whether additional standards are "necessary." For this rule, the Agency considered the 2020

Residual Risk Review of MATS in the manner and for the reasons described elsewhere in this final action.

Having concluded that CAA section 112(d)(6) allows the EPA to consider the results of an earlier CAA section 112(f)(2) residual risk review in subsequent technology reviews, we must determine how and to what extent the Agency may consider risk in determining whether revised standards are "necessary." As noted above, the clearest benchmark is in CAA section 112(f)(2)(A), which the EPA has long interpreted as requiring an ample-margin-of-safety analysis but not mandating that the Agency require additional reductions in HAP emissions after considering costs and other factors. The D.C. Circuit upheld this interpretation, describing the one-in-one million risk level as an "aspirational goal" of the statute for sources of HAP emissions and not as the level that every source category must achieve under CAA section 112(f)(2).⁷⁸

The EPA thus concludes that the statutory benchmarks for risk provide relevant guidance on whether additional regulation is "necessary" under CAA section 112(d)(6). If the remaining risk found during a prior residual risk review is below the one-in-one million risk level, the EPA may place greater emphasis on costs of the new controls. Over the years of implementing CAA section 112, the EPA developed cost metrics for evaluating whether it is reasonable to consider a particular control to be "necessary," and the Agency uses those metrics when evaluating whether controls are reasonable in several CAA section 112 contexts (*e.g.*, beyond the floor (BTF), ample margin of safety, generally available control technologies (GACT)). The EPA also uses these metrics when determining whether additional controls are necessary under CAA section 112(d)(6) on the theory that if the costs of such controls are within the range of what had been found reasonable in one rule, then those same costs are potentially reasonable for other source categories. If additional controls cost more than the historical range, we generally conclude that such controls are unnecessary. The EPA maintains that this approach is appropriate when the CAA section 112(f)(2) risk analysis shows remaining risks above statutorily set benchmarks (*e.g.*, risks greater than one-in-one million) or where noncancer risk from the source category emissions exceed a level adequate to protect

⁷⁴ *Ass'n of Battery Recyclers*, 716 F.3d at 673.

⁷⁵ 89 FR 38525 (May 7, 2024).

⁷⁶ *Id.* (quotation marks omitted).

⁷⁷ *Id.* at 38525 & n.31 (citing *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry*, 71 FR 76603, 76606 (December 21, 2006), and *Proposed Rules: National Emission Standards for Halogenated Solvent Cleaning*, 73 FR 62384, 62404 (October 20, 2008)).

⁷⁸ *NRDC*, 529 F.3d at 1082 (rejecting the argument that risks must be reduced to the one-in-one million threshold).

⁷¹ *Michigan*, 576 U.S. at 748–49.

⁷² *Michigan*, 576 U.S. at 748 (quoting 42 U.S.C. 7412(n)(1)(A)).

⁷³ *Id.* at 749 (citing 77 FR 9304, 9363 (February 16, 2012)).

public health with an ample margin of safety. However, where the MACT standard lowers cancer risks to below the statutory one-in-one million cancer risk threshold, the EPA concludes that more emphasis may be placed on cost in determining whether additional controls are “necessary” under CAA section 112(d)(6) within the context of the statute as a whole.

The statute makes clear that CAA section 112(d)(6) technology reviews are required even when a CAA section 112(f)(2) residual risk review finds cancer risk is below the one-in-one million threshold, and additional controls may be “necessary” when ongoing reductions in HAP are possible at relatively low cost. In cases like MATS, however, the EPA maintains that the effectiveness of the original MACT standard at lowering risks should be given greater weight. As noted in the 2020 Final Rule, no coal-fired EGU facility posed a cancer risk greater than one-in-one million. In fact, the highest cancer risk from non-Hg HAP metals from a coal-fired EGU was 0.3-in-one million, and most coal-fired EGUs were assessed to pose considerably lower cancer risks from such HAP emissions.⁷⁹ Despite these facts, in the 2024 Final Rule, the EPA established CAA section 112(d)(6) standards for emissions of fPM and corresponding standards for emissions of non-Hg HAP metals though the cost-effectiveness values of such controls were the highest (or among the highest) of any CAA section 112(d)(6) standard the Agency has established.⁸⁰ We now conclude it was not “necessary” to establish a new high-cost benchmark for non-Hg HAP metals from EGUs because the MACT standards in the 2012 MATS Rule achieved the aspirational goal for cancer risks from such HAP emissions. Instead, in such situations, the EPA believes a harder look at costs should be conducted and additional controls will be considered unnecessary unless the costs of such controls are at the lower range of cost acceptability. Imposing costs that are below historically accepted levels will continue to satisfy the statutory goal of continuing to reduce HAP emissions without unreasonably burdening source categories that pose very low risks due to HAP emissions. In addition, as noted above, even if the EPA did not consider the low remaining risks from the 2012 MACT standards as determined in the 2020 Final Rule, the EPA would conclude that the costs of the 2024

standards are unacceptably high in light of their high cost-effectiveness values, such that the 2024 standards are not necessary.

3. What key comments did the EPA receive on the filterable PM emission standard for existing coal-fired EGUs and what are our responses?

Comment: Some commenters agreed with the EPA’s proposal that the costs for the power sector to achieve the more stringent fPM standard are too high and are inconsistent with other technology review determinations. In the 2024 Final Rule, the EPA estimated that the cost-effectiveness for the 0.010 lb/MMBtu fPM emission limit was \$10.5 million per ton of non-Hg HAP metals and \$34,500 per ton of fPM. Commenters stated that these costs are not reasonable when compared to other technology reviews, including those cited by the EPA in the proposed rule, that rejected controls as not cost-effective. These technology reviews included the Petroleum Refinery Sector technology review⁸¹ (\$10 million per ton of total non-Hg HAP metals reduced), the Integrated Iron and Steel Manufacturing Facilities technology review⁸² (\$7 million per ton of non-Hg HAP metals reduced), and the Taconite Iron Ore Processing RTR⁸³ (\$16 million per ton of non-Hg HAP metals reduced). Furthermore, commenters noted that the EPA has rejected similar or even smaller cost-effectiveness values in other CAA section 112 rulemakings:

- In the Hazardous Waste Combustors NESHAP beyond-the-floor analysis,⁸⁴ the EPA declined to impose a more stringent dioxin/furan emission limit because of cost, finding \$2.5 million to \$4.9 million per gram toxicity equivalence of dioxin/furan removed.
- In the Shipbuilding and Ship Repair NESHAP RTR,⁸⁵ the EPA declined to revise the formaldehyde emission limit after finding that spray

line reconfiguration would cost \$43,000 per ton of formaldehyde reduced.

- In the Pulp and Paper NESHAP RTR,⁸⁶ the EPA declined to update standards in the final rule⁸⁷ for controlling kraft condensates emissions that would cost \$1,000 per ton of HAP removed or \$4 million per year.

Additionally, commenters stated that the cost analysis for the 2024 Final Rule underestimates overall compliance costs, as the EPA failed to identify all sources that would need to make air pollution control device upgrade investments and to account for unit-level operational challenges that could increase compliance costs. For example, commenters cited declarations submitted as part of challenges to the 2024 Final Rule, which stated that compliance with the 0.010 lb/MMBtu fPM emission standard at the Colstrip facility would have cost over \$350 million, with more recent estimates of over \$500 million that incorporate more accurate wage rates, structural steel install rates, scaffolding costs, duct installation costs, and total delivery costs.⁸⁸ Commenters pointed to the 2025 Proposal and stated that industrywide cost-effectiveness was at minimum \$10.5 million per ton of non-Hg HAP metals controlled, but the largest costs were found predominantly at Colstrip which results in approximately \$16 million per ton of non-Hg HAP metals reductions using the EPA’s “underestimated” costs.

Other commenters argued that the EPA was wrong in proposing that the cost effectiveness of the 0.010 lb/MMBtu fPM emission standard (as estimated in the 2024 Final Rule) is too high. Commenters stated that the examples rejecting high cost-effectiveness values that the EPA provided in the 2025 Proposal are flawed and should not be relied upon. These commenters asserted that the RTR for the Integrated Iron and Steel NESHAP also estimated a fPM cost effectiveness of \$160,000 per ton, well above the \$35,000 per ton of fPM estimated for the 2024 Final Rule. Further, these commenters stated that if the cost per ton of any of the non-Hg HAP metals is reasonable, then the control costs should also be regarded as reasonable. These commenters stated

⁸¹ *Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards*, 80 FR 75178, 75201 (December 1, 2015).

⁸² *National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Residual Risk and Technology Review*, 85 FR 42074, 42088 (July 13, 2020).

⁸³ *National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing Residual Risk and Technology Review*, 85 FR 45476, 45483 (July 28, 2020).

⁸⁴ *National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II)*, 70 FR 59402, 59462 (October 12, 2005).

⁸⁵ *National Emission Standards for Hazardous Air Pollutants for Shipbuilding and Ship Repair (Surface Coating); National Emission Standards for Wood Furniture Manufacturing Operations*, 76 FR 72050, 72056 (November 21, 2011).

⁸⁶ *National Emission Standards for Hazardous Air Pollutants: Pulp and Paper Residual Risk and Technology Review*, 76 FR 81328, 81345 (December 27, 2011).

⁸⁷ *National Emission Standards for Hazardous Air Pollutants: Pulp and Paper Residual Risk and Technology Review*, 77 FR 55698, 55701 (September 11, 2012).

⁸⁸ Document ID No. EPA-HQ-OAR-2018-0794-7154.

⁷⁹ Document ID No. EPA-HQ-OAR-2018-0794-0070.

⁸⁰ 89 FR 38530–35 (May 7, 2024).

that the EPA has previously accepted Hg cost effectiveness values of up to approximately \$32,000 per pound, which is the equivalent of \$64 million per ton reduced. Commenters noted that the rejected cost effectiveness values from the Petroleum Refinery NESHAP RTR (\$10 million per ton) and Integrated Iron and Steel NESHAP (\$7 million per ton) are at the low end of the accepted Hg cost-effectiveness value, highlighting that the EPA has approved higher dollar per ton values in the past. Lastly, commenters argued that the EPA ignored the 2024 Final Rule's explanation for why the Petroleum Refinery Sector and Integrated Iron and Steel Manufacturing Facilities reviews were not comparable,⁸⁹ and that the Agency also ignored the 2024 Final Rule's comparison of cost-effectiveness values with the Ferroalloys Production source category, in which the EPA approved higher cost-effectiveness values for PM than those estimated in the 2024 Final Rule.

Other commenters stated that the cost effectiveness comparison for a single facility bearing the highest costs under the 2024 Final Rule is inappropriate and arbitrary, as the cost-effectiveness ratio across an entire sector is very different than the cost-effectiveness ratio of a single facility. Commenters argued that it is expected that some facilities would face higher costs than others for a given regulation given differences in air pollution control devices. The commenters stated that it is irrational for the EPA to imply that the highest-cost facility's cost-effectiveness ratio cannot exceed a ratio rejected for a fleetwide average.

Response: The EPA generally agrees with commenters that cost effectiveness (i.e., the costs per unit of emissions reduction) is a metric that the Agency consistently considers, alongside other cost metrics, in CAA section 112 rulemakings where it can consider costs. The EPA also agrees that the Agency has the discretion in how it considers statutory factors, including costs, under CAA section 112(d)(6).⁹⁰ The Agency disagrees, however, that there is any particular threshold that renders a

potential control technology cost-effective or not.⁹¹

The EPA disagrees with the commenters who sought to distinguish prior rules in which the EPA declined to revise standards for non-Hg HAP metals due to the high cost-effectiveness values of those standards. As noted above, the cost-effectiveness of the 2024 Final Rule's revised standards for non-Hg HAP metals is substantially less favorable than in any other rule the EPA has promulgated under CAA section 112(d)(6). In several rules under CAA section 112(d)(6), the EPA declined to revise standards for non-Hg metal HAPs on grounds that the cost-effectiveness values were in the millions of dollars per ton reduced, which are roughly comparable to the cost-effectiveness values in the 2024 Final Rule. As commenters point out, in some of those cases, the EPA also noted industry-specific reasons for declining to adopt the revised standards, but the key reason in those rules, as here, was the high cost-effectiveness values. In addition, the commenters point to multiple cost-effectiveness values that the EPA has accepted in past actions for Hg control that are significantly higher than the values that the agency is rejecting for control of non-Hg HAP metals, but the EPA considers those values inappropriate for determining cost effectiveness of non-Hg HAP metals.

The EPA disagrees with commenters who argued that the 2025 Proposal focused on costs to a single facility. Although the EPA pointed out at proposal that the units at the Colstrip facility accounted for almost half of the 2024 Final Action's total compliance costs, that was not the basis for the proposed repeal and it is not the rationale for this final action repealing the more stringent fPM standard. Rather, the rationale is the high cost-effectiveness values, especially when coupled with the limited risk, including from the Colstrip facility.

Comment: Some commenters argued that the EPA failed to adequately explain why it is "necessary" under CAA section 112(d)(6) to revert to the 2012 MATS Rule standards when the CAA requires that the Agency "take into account developments in practices, processes, and control technologies" that have occurred since the EPA promulgated the original 2012 MATS

Rule.⁹² Commenters further asserted that the EPA must explain why the 2012 emissions standards are the maximum achievable emissions standards given major developments in control technology since 2012, including reduced costs and improvements of existing control technologies, better practices for monitoring the operation of ESPs, and more durable filter bag materials for FF, which commenters asserted the EPA did not dispute in the proposed rule. Commenters stated the EPA chose to disregard these developments and that the Agency's own analysis in the 2024 Final Rule showed that at least 93 percent of the industry is already attaining a 0.010 lb/MMBtu fPM emission standard.

Response: The EPA notes that it has authority to reconsider past decisions and to revise, replace, or repeal a decision to the extent permitted by law and supported by a reasoned explanation.⁹³ In this case, as in the 2024 Final Rule, the EPA did not conduct a new mandatory technology review but, instead, reviewed a prior technology review. The next technology review for this source category is due within 8 years of the prior review, which was finalized in 2020. The EPA further disagrees with these commenters to the extent they suggest that CAA section 112(d)(6) requires the Agency to select the maximum degree of emissions reductions in setting standards. The technology review under CAA section 112(d)(6) does not allow the Agency to recalculate the MACT floor for any currently regulated HAPs. Rather, CAA section 112(d)(2) provides that the EPA must require the maximum degree of reduction in emissions of HAP that the Administrator determines to be achievable, taking into consideration cost, non-air quality health and environmental impacts, and energy requirements, and CAA section 112(d)(3) prescribes specific requirements for calculating the MACT. The EPA's task under CAA section 112(d)(6) is not to recalculate a new, lower MACT, but to determine whether, taking into account developments in technology and other relevant information, it is "necessary" to revise the standards. Further, EPA regulated all HAP emitted from EGUs in 2012 so there are no gaps to fill.

⁹² See CAA section 112(d)(6), 42 U.S.C. 7412(d)(6) (requiring the Administrator to "review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under [section 112] no less often than every 8 years").

⁹³ See, e.g., *Fox Television Stations*, 556 U.S. at 515; *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 42.

⁸⁹ In the 2024 Final Rule, the EPA noted that the 2020 Integrated Iron and Steel Manufacturing rulemaking source category only covered 11 facilities with 3 tons per year (tpy) of HAP and 120 tpy of PM reductions, compared to MATS, which affected 314 coal-fired EGUs with estimated reductions of 8.3 tpy HAP and 2,537 tpy of fPM. See 89 FR 38524 (May 7, 2024).

⁹⁰ See, e.g., *Ass'n of Battery Recyclers*, 716 F.3d at 673–74 (allowing that the EPA may consider costs in conducting technology reviews under CAA section 112(d)(6)); *Nat'l Ass'n for Surface Finishing*, 795 F.3d at 11.

⁹¹ See, e.g., *National Emissions Standards for Hazardous Air Pollutants: Ferroalloys Production*, 80 FR 37366, 37381 (June 30, 2015) ("[I]t is important to note that there is no bright line for determining acceptable cost effectiveness for HAP metals. Each rulemaking is different, and various factors must be considered.").

In this instance, the EPA reevaluated the 2024 Final Rule and determined that a more stringent fPM emission standard is not “necessary,” including because of cost-effectiveness estimates, in light of the Agency’s 2020 Technology Review. In this action, the EPA updated its evaluation of fPM compliance data for the coal-fired fleet and associated costs of PM controls to achieve a lower standard; specifically, total annual costs are estimated to be approximately \$93.7 million with a cost effectiveness of \$11.1 million per ton of non-Hg HAP metals for the 0.010 lb/MMBtu fPM emission standard.⁹⁴ The EPA acknowledges the reduced costs and improvements of existing ESP and FF control technologies compared to estimates from the 2012 MATS Rule and acknowledges that the fleet is largely overperforming with the fPM emission standard, but that fact alone does not make the high cost-effectiveness number reasonable or necessary under section 112(d)(6), particularly in light of the low remaining risk.

Comment: Several commenters generally supportive of the proposal urged the EPA to acknowledge additional considerations for rejecting the 0.010 lb/MMBtu fPM emission standard. First, commenters stated that the 2024 Final Rule’s reliance on “considering cost in various ways”—such as comparing them to typical capital and total expenditures for the power sector, total power sector sales, and total PM upgrade control costs and emissions of the fleet—to explain its acceptance of high cost-effectiveness values should be rejected. Commenters questioned the use of compliance costs compared to revenues, arguing that the EPA would be hard-pressed to find that the utility sector as a whole cannot afford the cost of virtually any regulatory action, especially when such action is viewed in isolation. Commenters argued that the framing of considering costs in various ways in the 2024 Final Rule departed from the EPA’s longstanding precedent regarding cost consideration in an RTR.

Second, a commenter requested that the EPA also reject the 0.010 lb/MMBtu fPM emission standard because of a flawed technical analysis based on truncated and unrepresentative data. Commenters noted that, for many units, the EPA relied on only two quarters of data and failed to explain the reasoning

behind the EPA’s decision to not incorporate all compliance data. Commenters also said that the cost analysis should account for other indirect impacts on grid reliability, such as security risks associated with temporarily reduced electric generation capacity and lost revenues during the downtime required to engineer and retrofit additional control technologies required to comply with the 2024 Final Rule.

Alternatively, other commenters said that the EPA reasonably explained costs in the 2024 Final Rule and that the EPA’s proposal to repeal the fPM emission standard based on high costs is arbitrary and capricious. These commenters argued that the EPA’s view about what is cost-effective is subjective and has nothing to do with what can be achieved—considering costs or otherwise. Commenters stated that the EPA did not cite any example of cost being the sole factor supporting a decision to revise or not to revise standards, as it did in the proposed rule here.

Response: The EPA disagrees in part with commenters stating that the Agency does not consider costs in various ways in CAA section 112 rulemakings. As stated earlier in this preamble, the EPA routinely considers cost effectiveness metrics together with additional factors, such as other relevant cost metrics (e.g., total costs, annual costs, and costs compared to revenues), and impacts to the regulated industry, to determine whether, taking into account developments in practices, processes, and control technologies, it is “necessary” to revise emissions standards pursuant to CAA section 112(d)(6). For example, in the 2015 Ferroalloys rulemaking, the EPA rejected a potential control option due to concerns about technical feasibility and the significant economic impacts the option would create for the industry, including potential facility closures that would impact significant portions of industry production.⁹⁵ The EPA agrees with these commenters, however, that the Agency’s statements about the power sector in the 2024 Final Rule are not appropriate reasons to accept higher cost-effectiveness values relative to other source categories. As explained in section III.A.1 of this preamble, cost-effectiveness metrics are an important means of evaluating whether developments in technology make a revision “necessary” because they present the emission-reduction benefit relative to the cost of such emission

reduction. Characteristics of the power sector such as number of units and quantity of emissions do not mean that metric is not reasonable, because the metric is already keyed to ton of HAP emissions reduced.

With respect to commenters’ argument that the EPA’s view about what is cost effective is subjective and therefore an improper basis for repealing the revised standards in the 2024 Final Rule, the EPA disagrees. Congress vested the EPA with authority to make judgments about when a revision is “necessary” under CAA section 112(d)(6), and cost-effectiveness metrics are an important input to the exercise of that reasoned judgment. To the extent that the EPA’s view now differs from the view adopted in the 2024 Final Rule, the law is clear that the Agency has authority to reconsider, repeal, or revise past decisions to the extent permitted by law so long as the EPA provides a reasoned explanation.⁹⁶ Indeed, the position taken in the 2024 Final Rule was itself a departure from the conclusions reached in the 2020 Final Rule, as the Agency acknowledged at the time and asserted was permissible under the same legal doctrine supporting this reconsideration.⁹⁷ As noted in the 2024 Final Rule, the cost effectiveness ratio of the revised fPM standard for non-Hg metal HAPs was significantly higher than the cost-effectiveness ratios for those HAPs the EPA has rejected in the past in technology reviews conducted under CAA section 112(d)(6) for other industries.⁹⁸ The cost effectiveness ratio of the revised fPM standard was also higher than cost-effectiveness ratios that the EPA accepted for fPM emissions in other industries in other CAA section 112(d)(6) reviews. The EPA now finds that the costs for the power sector to achieve the revised standard are too high, and, separately, certainly too high in light of the low remaining risks, such that the revised standard is not necessary under CAA section 112(d)(6).

B. Required Compliance Demonstration for the Filterable PM Standard

1. What is the EPA finalizing for the compliance demonstration requirements for the filterable PM standard?

The EPA proposed to repeal the requirement that sources must use PM CEMS exclusively for demonstrating

⁹⁴ Updates and revisions to the 2024 Technical Memo are described in detail in the *2025 Update to the 2024 Technology Review for the Coal- and Oil-Fired EGU Source Category* memorandum (“2025 Technical Memo”) available in the rulemaking docket (Docket ID No. EPA-HQ-OAR-2018-0794).

⁹⁵ 79 FR 60238, 60273 (October 6, 2014) (supplemental proposed rule).

⁹⁶ See, e.g., *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 42 (“[R]egulatory agencies do not establish rules of conduct to last forever [and] an agency must be given latitude to adapt their rules and policies to . . . changing circumstances.”).

⁹⁷ 89 FR 38513 (May 7, 2024).

⁹⁸ *Id.* at 38533–34.

compliance with the fPM emission standard, as well as the adjusted QA criteria,⁹⁹ and to return to the previous regulatory language from the 2012 MATS Rule and 2020 Final Rule that allowed owners and operators to demonstrate compliance using either quarterly stack testing, PM CPMS, or PM CEMS. The EPA solicited comment on the rationale that the higher costs for EGUs not currently utilizing PM CEMS, the availability of other air pollution control performance indicators that can inform operators of malfunctions, and the adequacy of current compliance options support repealing the requirement that all coal- and oil-fired EGUs must use PM CEMS (Question #3). The EPA also proposed and solicited comment on reinstating the low emitting EGU (LEE) program for fPM and non-Hg HAP metals, which reduces the required stack testing frequency for sources that demonstrated that their emissions are less than 50 percent of the corresponding emissions limit for 3 consecutive years (Question #4). Lastly, the EPA proposed retaining the updated fPM measurement requirements of allowing either an increased minimum volume per run or the collection of a minimum mass per run.¹⁰⁰ The EPA solicited comment on these measurement requirements for fPM compliance demonstration, as the Agency believed retaining the additional option of sample mass would reduce measurement uncertainty and may reduce test durations and, therefore, reduce fPM testing costs (Question #5).

Commenters provided both supportive and opposing arguments regarding the EPA's proposed compliance demonstration requirements for fPM. With several minor, technical exceptions, comments received on the proposed repeal of the PM CEMS compliance demonstration requirement for fPM did not result in a change to the position the Agency set out in the proposed rule. Therefore, the EPA is repealing the requirement to use PM CEMS for compliance demonstration with the fPM emission standard and

restoring flexibility to owners and operators to choose between the fPM compliance demonstration options as proposed. The EPA is also reinstating the LEE program for fPM and non-Hg HAP metals as proposed. The EPA received comments that supported retaining the flexibility of a minimum volume per run or minimum mass per run sampling requirements but argued that the updated minimum volume per run sampling requirement would result in longer test runs and impose significant burdens on operators. Based on these comments, along with an additional review of the accuracy of PM CEMS at low levels, the EPA is finalizing as proposed but with minor technical revisions to the sampling requirements based on the purpose of the fPM testing. If PM CEMS are used for the compliance demonstration, owners and operators are required to follow the updated sampling requirements for minimum volume per run or minimum mass per run, as proposed in the 2025 Proposal. For all other compliance demonstration options, owners and operators are required to collect a lower minimum sample volume as originally required in the 2012 MATS Rule.

2. What is the rationale for the EPA's final approach and decisions on the compliance demonstration requirements for the filterable PM standard?

Upon further review, the EPA concludes that mandating the use of PM CEMS and removing previously available compliance alternatives was not "necessary" pursuant to CAA section 112(d)(6). As discussed in section III.A of this preamble, the EPA is finalizing the proposed repeal of the more stringent fPM emission standard from the 2024 Final Rule and returning to the fPM emission standard set in the 2012 MATS Rule and reaffirmed in the 2020 Final Rule. Therefore, the EPA's conclusion in the 2024 Final Rule that the costs for PM CEMS are commensurate with the costs for stack testing¹⁰¹ no longer applies, because longer duration runs that increase stack testing costs are no longer necessary to demonstrate compliance with a lower fPM. Many sources also use the stack testing compliance option to efficiently merge their PM and HCl testing programs into a single testing mobilization to test for those pollutants in conjunction, possibly yielding further cost savings. Further, the Agency finds that although the 2024 Final Rule invoked CAA section 114(a)(1)(C) as offering additional authority for the PM

CEMS requirement,¹⁰² the provision is equally applicable to the alternative compliance demonstration options restored in this final rule.¹⁰³

The 2024 Final Rule requirement to use PM CEMS to demonstrate compliance meant that up to two-thirds of EGU owners and operators would face higher compliance costs than when allowed to use quarterly stack testing or PM CPMS. As shown in more detail in the RIA for this final rule, the EPA estimates a cost savings of \$2.9 million per year related to the repeal of the PM CEMS requirement, after the two-year exemption period (2030 to 2037); the estimated cost savings during the two-year exemption period (2028 to 2029) is \$1.2 million per year. While the EPA concluded in the 2024 Final Rule that the use of PM CEMS would allow for more efficient pollutant abatement and increased transparency of EGU emissions,¹⁰⁴ the Agency no longer believes that those advantages outweigh the increased cost of PM CEMS compared to the two other compliance options (*i.e.*, PM CPMS and quarterly stack testing) that were determined to be appropriate for demonstrating compliance with the fPM emission standard in the 2012 MATS Rule.

The EPA noted in the 2024 Final Rule that CEMS enable power plant operators to quickly identify and correct problems with air pollution control devices.¹⁰⁵ However, there are other ways that owners and operators can become aware of air pollution control malfunctions without employing PM CEMS. For example, operators at EGUs with an ESP can instantaneously track and record opacity, secondary corona power, secondary voltage (*i.e.*, the voltage across the electrodes), secondary current (*i.e.*, the current to the electrodes), spark rate, and alarm and fault indicators to ensure proper functionality of the ESP in real time. For EGUs with technology such as FFs, bag leak detection systems (BLDS) and parameters like pressure differential (*i.e.*, pressure drop), inlet temperature, temperature differential, exhaust gas flow rate, cleaning mechanism and cycle operation, and fan current and speed can serve as reliable indicators of process operations. These indicators also provide valuable data for analyzing trends and making informed

⁹⁹ Emission standards are used to determine the acceptable tolerance interval when correlating PM CEMS. In the 2024 Final Rule, the EPA instructed the use of 0.015 lb/MMBtu, instead of the finalized more stringent limit of 0.010 lb/MMBtu, when developing PM CEMS correlations to ease difficulties correlating PM CEMS. See 89 FR 38535 (May 7, 2024).

¹⁰⁰ For coal- and solid oil-fired EGUs, the 2024 Final Rule required a minimum catch for fPM of 6.0 mg or a minimum sample volume of 4 dry standard cubic meters (dscm) per run. Requirements for IGCCs included a minimum catch for fPM of 3 mg or a minimum sample volume of 2 dscm. There were no changes to the minimum catch and sample volume requirements for oil-fired EGUs.

¹⁰¹ 89 FR 38535–37 (May 7, 2024).

¹⁰² *Id.* at 38535.

¹⁰³ See CAA section 114(a)(1), (a)(1)(C)–(D), 42 U.S.C. 7414(a)(1), (a)(1)(C)–(D) (authorizing the EPA to require source owners or operators to "install, use and maintain such monitoring equipment, and use such audit procedures, or methods" and "sample such emissions" as required by the Administrator).

¹⁰⁴ 89 FR 38535 (May 7, 2024).

¹⁰⁵ *Id.* at 38536.

decisions about operational improvements and investments. As noted earlier in this preamble and in the 2024 Final Rule, a large majority of sources are already reporting measured compliance data showing fPM emissions that are below the previous fPM standard of 0.030 lb/MMBtu (via either PM CEMS or the stack testing compliance option), which further illustrates that the various options for demonstrating compliance with the fPM standards have been appropriate and effective.¹⁰⁶

Therefore, the EPA is repealing the requirement to use PM CEMS for demonstrating compliance with the fPM emission standard, as well as the adjusted QA criteria,¹⁰⁷ and returning to the previous requirement that allowed owners and operators to demonstrate compliance using quarterly stack testing, PM CPMS, or PM CEMS. This provides greater flexibility to owners and operators and reduces the compliance burden, while still assuring compliance with the fPM emission standard.

The EPA is also reinstating the LEE program for fPM and non-Hg HAP metals, which reduces the stack testing frequency for sources that have demonstrated that their emissions are less than 50 percent of the applicable emission limit for 3 consecutive years. Sources that had previously demonstrated that they qualify for LEE status would not have to re-demonstrate that qualification. In the 2024 Final Rule, the EPA found that the optional LEE program was “superfluous” due to the PM CEMS requirement and the revised fPM emission standard.¹⁰⁸ However, as the EPA is repealing those requirements, reinstating the LEE program for fPM and non-Hg HAP metals will further reduce the costs associated with stack testing for sources that opt in, while still assuring compliance with the emission

standard.¹⁰⁹ As mentioned earlier in this section, since LEE testing is only required once every 3 years once a source has attained LEE status, the ongoing LEE testing program is approximately 8 to 10 percent of the cost of a quarterly stack testing program.

Finally, the EPA is also updating the fPM measurement requirements that allow either an increased minimum volume per run or the collection of a minimum mass per run. As stated in section III.A of this preamble, a large majority of sources have reported measured compliance data showing fPM emissions below the 0.030 lb/MMBtu fPM standard. It is important that a sufficient quantity (*i.e.*, mg of mass) of fPM be collected during these fPM test runs to allow for the accurate measurement of PM emissions, especially when the testing is being conducted to correlate or certify a PM CEMS. For these reasons, we have modified the fPM testing requirement to collect either a minimum catch of 6.0 mg or a minimum sample volume of 4 dscm per run if using a PM CEMS for compliance, whereas all other compliance demonstration options will be required to collect a minimum sample volume of 1 dscm per PM test run.

3. What key comments did the EPA receive on the compliance demonstration requirements for the filterable PM standard and what are our responses?

Comment: Some commenters agreed that there are other air pollution control indicators such as opacity, ESP power, and baghouse differential pressure that are used to provide timely information on potential equipment performance issues or malfunctions. Additionally, commenters said that the PM CEMS requirement falsely assumed the data would provide a better indicator of control equipment performance, which may not always be the case since PM CEMS measurements can be influenced by a variety of factors. Commenters stated that sources are required to comply with limits at all times, including between performance tests, and that under 40 CFR 63.10000(b), EGUs “must operate and maintain any affected source, including associated air

pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.”

Commenters also stated that owners and operators have multiple tools beyond CEMS to identify malfunctions in air pollution control equipment. These commenters agreed with the EPA’s explanation in the proposed rule that facilities equipped with ESPs can monitor parameters such as opacity levels which can indicate higher than normal levels of particulates in the exhaust gas; secondary corona power, secondary voltage, and secondary current (indicating the collection of particulates on the plates and wires) to verify proper operation; power levels to the rappers and vibrators (used to clean the plates and wires); and the continued operation of the ash removal system to prevent system backup. For units with FFs, commenters stated that operators can rely on, as indicators of control performance, BLDS; pressure differential (indicates a bag leak or excessive buildup of the ash layer on the filters); temperature differential (for optimal bag/filter conditions); exhaust gas flow rate to detect unfiltered gas escaping the system; power levels and operations of the bag vibrators or reverse-air systems to ensure proper bag cleaning activity; fan current which can indicate plugged bags; and opacity monitors. According to commenters, these monitoring practices, which are already in use across the industry, provide meaningful and timely insight into equipment condition and emissions performance without necessitating continuous emissions data. Additionally, other commenters stated that there are sufficient compliance indicators in place to ensure that PM (and HCl) emissions remain low between stack tests, such as operation of scrubber technology.

Alternatively, other commenters argued the EPA did not provide evidence that other parameters can be a substitute for complying with the fPM limit or be used in ways to quickly identify problems with pollution controls. Commenters also stated that the EPA did not demonstrate that these alternative parameters will provide the same or similar benefits as PM CEMS. Commenters disagreed that other performance indicators are as reliable as PM CEMS to identify malfunctions with the same sensitivity and that there is no requirement to continuously monitor and maintain a record of each of these parameters. Further, commenters argued that while monitoring of operational parameters of control technologies may

¹⁰⁶ Additionally, all fPM compliance data can be accessed by the public via the EPA’s Web Factor Information Retrieval System (WebFIRE) at <https://cfpub.epa.gov/webfire>, which maintains the availability and transparency of fPM emissions.

¹⁰⁷ New PM CEMS installations must follow Performance Specification 11 (PS-11), which requires the development of a site-specific correlation curve to relate PM CEMS readings to the PM reference method values. Emission standards are used to determine the acceptable tolerance interval when correlating PM CEMS. In the 2024 Final Rule, the EPA instructed the use of 0.015 lb/MMBtu, instead of the finalized more stringent limit of 0.010 lb/MMBtu, when developing PM CEMS correlations to ease difficulties correlating PM CEMS. See 89 FR 38535 (May 7, 2024).

¹⁰⁸ 89 FR 38510 (May 7, 2024).

¹⁰⁹ The LEE provisions are designed to ensure emissions are minimized. For example, EGUs equipped with a main stack and a bypass stack or bypass duct configuration that allows the effluent to bypass any pollutant control device are not allowed to pursue the LEE option under 40 CFR 63.10000(c). Furthermore, under 40 CFR 63.10000(c)(1)(i)(D), EGUs claiming LEE status may bypass a control device during emergency periods for no more than 2 percent of the EGU’s annual operating hours.

reveal anomalous conditions broadly, it does not quantify the mass or concentration of increased fPM emissions.

Response: The EPA agrees that there are reliable performance indicators that are continuously monitored and recorded, which are used to provide timely information on potential equipment performance and control device issues or malfunctions. As discussed in section III.B of this preamble, the EPA noted in the 2024 Final Rule that PM CEMS enable power plant operators to quickly identify and correct problems with air pollution control devices.¹¹⁰ However, there are other ways that owners and operators become aware of air pollution control malfunctions without employing PM CEMS. For example, for proper process operations purposes of the unit, operators of EGUs with an ESP can instantaneously track and record opacity, secondary corona power, secondary voltage (*i.e.*, the voltage across the electrodes), secondary current (*i.e.*, the current to the electrodes), spark rate, and alarm and fault indicators to ensure proper functionality of the ESP in real time. Similarly, for EGUs with technology such as FFs, BLDS and parameters like pressure differential (*i.e.*, pressure drop), inlet temperature, temperature differential, exhaust gas flow rate, cleaning mechanism and cycle operation, and fan current and speed can serve as reliable indicators of process operations. These indicators, which are routinely monitored and recorded regardless of any regulatory requirement, also provide valuable data for analyzing trends and making informed decisions about operational improvements and investments. Moreover, these indicators help ensure that EGUs are operated and maintained, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. As noted earlier in this preamble and in the 2024 Final Rule, a large majority of sources are already reporting measured compliance data showing fPM emissions well below the previous fPM standard of 0.030 lb/MMBtu (either via PM CEMS or the stack testing compliance option), which further illustrates that the various options for demonstrating compliance with the fPM standards have been appropriate and effective.

Comment: Commenters agreed with the EPA that the costs of installing PM CEMS are significant and the 2024 Final

Rule failed to articulate why such costs were justified as compared to the other compliance methods permitted since 2012. Commenters argued that the EPA did not consider the fact that certain CEMS technologies, based on their designs and models, might not have replacement parts readily available from the original equipment manufacturers; therefore, when a critical component of the CEMS breaks or needs replacement, repairs could require costly expenditures or even a total replacement of the CEMS. Commenters also provided examples of how stack testing or CPMS costs could be much less than the cost of PM CEMS. For instance, commenters said that some sources conduct quarterly testing for HCl along with fPM to reduce stack testing costs further by merging the HCl testing and fPM testing into the same testing program mobilization, which would be noticeably cheaper than testing for HCl and fPM separately. Commenters also noted that testing costs for EGUs that previously qualified for PM LEE status were much less than the cost of PM CEMS, by some estimates as much as 20 to 30 times lower. Lastly, commenters explained that CPMS provide lower testing costs, simpler procedures for establishing operating limits, and fewer operational burdens compared to PM CEMS.

Other commenters disagreed that the higher costs of PM CEMS justify repealing the PM–CEMS-only compliance demonstration requirement from the 2024 Final Rule. Further, commenters said that the benefits of reduced pollution through the use of PM CEMS would exceed the minor incremental cost between PM CEMS and stack testing.

Response: As discussed in section III.A of this preamble, the EPA is finalizing the repeal of the more stringent fPM emission standard. The more stringent fPM standard required longer duration runs, which would increase the relative costs of stack testing. Therefore, the EPA's conclusion in the 2024 Final Rule that the costs for PM CEMS are commensurate with the costs for stack testing no longer applies because stack testing costs are not increasing due to longer duration runs.

However, the EPA disagrees that sources that elect to conduct quarterly testing for HCl tests combined with fPM would greatly reduce stack testing costs. On the contrary, adding HCl testing to an fPM testing program (or adding fPM testing to an HCl testing program) would result in an increased cost for testing, as opposed to lowering the cost. While some cost savings would be realized by efficiently “merging” a fPM and HCl

testing programs into a single testing mobilization to test for those pollutants in conjunction, this approach would not result in a lower cost than what would be realized if testing for PM only.¹¹¹ Nevertheless, the EPA understands that testing for fPM and HCl would not double the cost of an “fPM only” test program, since the fPM and HCl testing would occur concurrently without needing separate testing mobilizations, equipment setups, and equipment tear downs.

The EPA agrees that testing costs for EGUs that previously qualified for PM LEE status will be much lower than the cost of PM CEMS, yielding further cost savings. Since LEE testing is only required once every 3 years once a source has attained LEE status, the EPA estimates that an ongoing LEE testing program is approximately 8 to 10 percent of the cost of a quarterly stack testing program.¹¹²

Comment: Some commenters argued that the EPA failed to adequately explain its changed view of PM CEMS in terms of superior accuracy, transparency, and pollution reduction afforded by using PM CEMS, asserting that PM CEMS are already widely used throughout the industry and that the costs are small compared to a facility's overall operating expenses. These commenters stated that the EPA did not demonstrate that the other compliance demonstration options will provide the same or similar benefits as PM CEMS. Commenters asserted that PM CEMS have the benefits of greater reliability and accuracy and that continuous monitoring allows rapid detection of pollution problems so violations can be prevented or quickly fixed. Commenters also asserted that real-time information on pollution has more operational relevance for plant managers than do stack tests because real-time CEMS data allow managers to find the reasons for problems and provide learning that can have significant long-term benefits. Specifically, commenters stated that in the 2024 Final Rule, the EPA found that requiring the use of PM CEMS would provide 35,040 15-minute values for each EGU during a 1-year period, which is 243 times more information than is

¹¹¹ Commenters claim that quarterly stack testing for fPM costs \$57,100/year, while merging the fPM testing with the HCl testing into the same testing mobilization would lower the testing costs to \$37,500/year, yielding almost \$20,000/year in cost savings. The EPA disagrees that costs for merging the stack testing for fPM and HCl would be lower than testing for fPM only.

¹¹² Per 40 CFR 63.10000(c)(1)(iii), an ongoing LEE PM testing program is required at least once every 36 months (or at 1/12th the frequency (*i.e.*, 8.3 percent)) of a quarterly PM testing program to demonstrate continued LEE status.

¹¹⁰ 89 FR 38536 (May 7, 2024).

provided by quarterly stack testing under the 2012 MATS Rule. Commenters also asserted that continuous monitoring can reveal wide variability that is obscured with stack tests that occur once a quarter, once a year, or even less frequently; and that continuous monitoring allows an automated response that can fix the problem before noncompliance occurs, or an alarm that notifies relevant personnel that a problem is occurring. Commenters also asserted that continuous monitoring is also a deterrent to negligence and fraud; when companies know that increases in pollution can be detected in real time, they are less likely to engage in risky or prohibited practices. Commenters also asserted that CEMS monitoring data allows the facility, neighbors, and regulatory entities to see if the facility is complying with the standard, as it does not rely on an outdated monitoring method and assumption that emissions will consistently remain at the level found during an unreliable stack test.

Further, commenters asserted that State regulatory programs rely on PM CEMS data to effectively limit emissions. For example, the Illinois Control Board recently relied on PM CEMS data in promulgating emissions limits for industrial facilities, including coal-fired power plants, during period of “start-up, malfunction, or breakdown.” Commenters said that this analysis would have been difficult to perform if only stack testing data were available, which would not comprehensively capture emissions levels during atypical startup, malfunction, or breakdown periods.

Response: The EPA recognizes that PM CEMS may have certain advantages over periodic stack testing in some situations. However, as discussed in section III.B of this preamble, pursuant to CAA section 112(d)(6), the EPA must consider cost in deciding whether it is “necessary” to revise the requirements and has broad discretion in selecting reasonable compliance demonstration methods under CAA section 112 and 114(a)(1). Stack testing under MATS has been shown to be less costly than operating and maintaining a PM CEMS on an annualized cost basis.¹¹³ Moreover, sources subject to both an applicable PM and HCl standard under MATS may use the stack testing compliance option to efficiently merge their PM and HCl testing programs into a single testing mobilization to test for

those pollutants concurrently, possibly yielding further cost savings. The EPA also notes that stack testing for fPM under MATS continues to be required on a quarterly basis, which is more frequent than typical stack test programs which are required at either annual or multi-year frequencies.¹¹⁴ Finally, there is no indication in the record that EGUs are in noncompliance with the fPM standard. The record demonstrates consistent overperformance of the standard by a large percentage of the regulated community. In light of this, it is reasonable to continue to provide flexibility, and it renders the additional cost of mandating PM CEMS unnecessary.

Comment: Regarding stack testing for fPM, commenters generally agreed with the EPA’s proposal to retain the option of allowing either an increased minimum volume per run or the collection of a minimum mass per run, since that option would provide owners and operators greater flexibility that may reduce measurement uncertainty, lower test durations, and therefore lower the fPM stack testing costs. However, commenters requested that the proposed updated minimum volume per run of 4 dscm should instead return to the 1 dscm level of the 2012 MATS Rule. Commenters said that a 4 dscm minimum volume per run for all compliance demonstration options would require longer duration stack test runs of approximately 9 hours, posing larger costs, emissions, and operational difficulties for units.

Further, commenters argued that if the EPA finalized the repeal of the more stringent fPM limit and the PM–CEMS-only compliance demonstration requirement, the increase to 4 dscm minimum volume for each fPM stack testing run would no longer be prudent for all compliance demonstration purposes. While commenters stated that higher sample volumes could be useful to reduce measurement uncertainty for sources operating near emission limits or with low-level test measurements, individual owners and operators are best able to make such decisions based

on the unit-specific compliance strategies. Commenters who disagreed with the EPA’s proposal to retain these updated sampling requirements argued that more mass or volume does not create a more accurate correlation with PM CEMS, as the overall shape of the correlation curve is defined by mid- and high-level test conditions that have sufficient fPM mass due to artificially detuned conditions. A few commenters asserted that a minimum mass option is not feasible, as the amount of PM mass collected on the filter during stack testing is not known until after the run is completed and the filters are dried and weighed. While historical test results should enable sources to reasonably estimate the mass that will be collected during each fPM stack test run, commenters argued that sources should not be required to repeat test runs based solely on the collection of less mass than expected.

Other commenters argued that the updates to the sampling requirements in the 2024 Final Rule are necessary to ensure reliable test results, particularly at the low levels of fPM many EGUs are measuring. However, commenters expressed concern that the updates to the sampling requirements combined with the repeal of the more stringent fPM emission limit could result in emission spikes during stack testing. Commenters argued that the lower fPM emission standard combined with the sampling requirements in the 2024 Final Rule would have required plants to maintain the low emission rates they have been demonstrating and better protect surrounding communities.

Response: The EPA agrees that sampling requirements that allow either an increased minimum volume per run or the collection of a minimum mass per run would provide EGU owners and operators greater flexibility. The EPA also recognizes that a 4 dscm minimum volume per run would require longer duration stack test runs and that those longer test runs are not necessary for all fPM compliance demonstration options.

However, the EPA disagrees with the assertion that more mass or volume does not create a more accurate correlation with PM CEMS. While the mid- and high-level test conditions during PM CEMS correlations or verifications will most likely use the minimum catch value of 6.0 milligrams (mg) per run, it is still necessary to accurately measure values for the low-level test conditions. The EPA agrees with commenters that historical test data provides sources with a reasonable indicator and estimate of the potential mass that would be collected during each test run, therefore making it unnecessary to utilize the

¹¹³ Memo from Barrett Parker, EPA to Docket ID No: EPA–HQ–OAR–2018–0794, “Revised Estimated Non-Beta Gauge PM CEMS and Filterable PM Testing Costs” (December 21, 2023).

¹¹⁴ For example, industrial boilers subject to 40 CFR part 63, subpart DDDDD, are required to perform fPM testing on either an annual or 3-year frequency, depending on the PM emission rate during testing. For stationary reciprocating internal combustion engines subject to 40 CFR part 63, subpart ZZZZ, testing for carbon monoxide (CO) is required every 8,760 hours or 3 years, whichever comes first. For stationary combustion turbines subject to 40 CFR part 63, subpart YYYYY, testing for formaldehyde is required on an annual basis. However, testing for fPM is not required for stationary combustion turbines under 40 CFR part 63, subpart YYYYY, or 40 CFR part 630, subpart KKKK, and is instead at the discretion of the delegated authority.

minimum volume requirement, especially at the mid- and high-level test conditions.

After considering comments, and because the EPA is finalizing the repeal of the PM CEMS requirement and again allowing other fPM compliance demonstration options, the EPA is also finalizing minor technical revisions to the fPM sampling requirements. Specifically, the EPA is finalizing the requirement that allows EGU owners and operators using PM CEMS for compliance to collect either a minimum catch of 6.0 mg or a minimum sample volume of 4 dscm per run, in order to provide additional testing flexibility while also ensuring that a sufficient PM CEMS correlation sample is obtained. For EGU owners and operators using any other compliance demonstration option, the EPA is finalizing the revised minimum sample volume of 1 dscm per PM test run, which is considered sufficient for a representative gravimetric assessment of a source's PM compliance status.¹¹⁵

C. Hg Emission Standard for Lignite-Fired EGUs

1. What are we finalizing as the Hg emission standard for lignite-fired EGUs?

In the proposed rule, the EPA proposed to repeal the Hg standard for lignite-fired EGUs in the 2024 Final Rule and to return to the 4.0 lb/TBtu emission standard promulgated in the 2012 MATS Rule and retained in the 2020 Final Rule. The EPA solicited comment on whether there is sufficient data demonstrating that the standard can be met by lignite-fired EGUs with a range of boiler types and variable fuel composition (Question #6). The EPA also solicited comment on other achievable and cost-effective Hg standards for lignite-fired EGUs that are based on developments in practices, processes, and control technologies that the EPA should consider as an alternative to a standalone repeal of the 1.2 lb/TBtu standard (Question #7).

Upon further consideration and after reviewing comments received, the EPA is repealing the 1.2 lb/TBtu Hg limit for

lignite-fired EGUs that was promulgated in the 2024 Final Rule and reverting to the 4.0 lb/TBtu Hg limit that was set in the 2012 MATS Rule and retained in the 2020 Final Rule.

2. What is the rationale for our final approach and decisions on the Hg emission standard for lignite-fired EGUs?

In the 2012 MATS Rule, the EPA promulgated a beyond-the-floor standard for Hg for the subcategory of existing coal-fired units designed for “low rank” virgin coal (*i.e.*, lignite) based on the use of ACI for Hg control.¹¹⁶ The EPA established a Hg emission standard of 4.0 lb/TBtu for lignite-fired utility boilers and 1.2 lb/TBtu for utility boilers firing all other types of coal (*e.g.*, anthracitic coal, bituminous coal, subbituminous coal, and coal refuse).

The 2024 Final Rule lowered the Hg standard for lignite-fired EGUs from 4.0 lb/TBtu to 1.2 lb/TBtu based on the EPA's determination that commercially available control technologies and improved methods of operation would allow lignite-fired EGUs to meet a more stringent emission standard. The more stringent Hg emission standard brought the requirement for lignite-fired EGUs in line with the emission limitation requirements of EGUs firing all other types of coal. In the 2024 Final Rule, the EPA reviewed coal composition information and concluded that the Hg content, the halogen content, and the alkalinity were similar between various lignite and subbituminous coals. In 2021, EGUs firing subbituminous coal emitted Hg at an average annual rate of 0.6 lb Hg/TBtu with measured values as low as 0.1 lb/TBtu, which the Agency found demonstrated that EGUs burning subbituminous coal have utilized control options to meet the 1.2 lb/TBtu emission standard despite the challenges presented by the low halogen content in the coal (which results in difficult-to-control elemental Hg vapor in the flue gas stream).¹¹⁷ The Agency asserted that its cost-effectiveness estimates for a model 800 MW lignite-fired EGU using a range of sorbent injection rates to meet the revised Hg emission standard were lower or consistent with cost-effectiveness values for Hg controls that the EPA has found to be acceptable in previous rulemakings.

After reviewing the revised emission standard that was promulgated in the 2024 Final Rule, the EPA is repealing the revised Hg emission limit for lignite-

fired EGUs because the revised standard was based on insufficient data to demonstrate that lignite units can meet the lower limit over the range of boiler types and variable compositions of fuels used at lignite-fired EGUs. Commenters provided both supportive and opposing arguments for issues regarding the Hg limit for lignite-fired EGUs. Comments received on the proposed repeal of the Hg limit for lignite-fired EGUs did not persuade the Agency to change its position from that set out in the proposed rule.

While the EPA found that all 22 existing lignite-fired EGUs at 12 facilities would need to control their Hg emissions to 95 percent or less to meet an emission standard of 1.2 lb/TBtu in the 2024 Final Rule,¹¹⁸ the Agency did not demonstrate that this high level of Hg removal is generally achievable for all lignite-fired units in the source category while taking into account the wide-ranging and highly variable Hg content of the various lignite fuels. In fact, Hg emission rates reported in the 2024 Final Rule from units at 11 of the 12 lignite facilities were well above the final 1.2 lb/TBtu emission standard.¹¹⁹ The EPA instead primarily relied on the emission reduction performance of only two units (at the Twin Oaks facility in Texas) that achieved the revised emission standard.¹²⁰ Between August 1 and September 19, 2023, a series of Hg emissions performance tests were conducted on Twin Oaks units 1 and 2. The average Hg emissions rates for the 30-boiler operating day performance tests were 1.1 lb/TBtu for unit 1 and 0.9 lb/TBtu for unit 2.¹²¹ Further, in performance testing for the previous year (2022), the average Hg emissions rates for the 30-boiler operating day performance test were 0.9 lb/TBtu for unit 1 and 0.6 lb/TBtu for unit 2. However, these tests were conducted over a limited operating period and are not sufficient to establish that meeting a 1.2 lb/TBtu standard continuously is possible for all lignite-fired EGUs.

Furthermore, the Twin Oaks facility, constructed in the early 1990s, is one of the newest lignite units and uses a circulating fluidized bed (CFB) combustor, which affects Hg emissions. Conventional boilers use coal that is pulverized to a very fine particle size (*i.e.*, powdered) to maximize combustion efficiency and to minimize unburned carbon. In contrast, the design

¹¹⁵ More specifically, the 4 dscm sample volume (or 6.0 mg sample catch) requirement would apply to any test associated with PM CEMS testing (*e.g.*, Performance Specification 11 (PS-11) correlation curves, relative response audits (RRAs), and response correlation audits (RCAs)), whereas the 1 dscm sample volume requirement would apply to quarterly PM compliance testing. PM LEE testing programs would also be based upon the 1 dscm sample volume requirement, yet the required minimum sample volume for LEE testing will continue to be increased nominally by a factor of 2 (*i.e.*, at least 2 dscm), per 40 CFR part 63, subpart UUUUU, table 2.

¹¹⁶ 77 FR 9304 (February 16, 2012).

¹¹⁷ 88 FR 24880 (April 23, 2023).

¹¹⁸ Since the 2024 Final Rule, the Martin Lake and Limestone facilities have undergone permit changes that no longer allow the burning of lignite coal.

¹¹⁹ 89 FR 38546 (May 7, 2024).

¹²⁰ *Id.* at 38539.

¹²¹ *Id.* at 38540.

of CFB combustors permits the burning of larger-sized coal particles. Fluidized bed units typically operate at lower temperatures compared to conventional boilers and have longer fuel residence times. As a result, CFB combustors typically have higher levels of unburned carbon present in the fly ash. The unburned carbon particles can behave much like injected activated carbon sorbent and, coupled with the lower operating temperature and longer residence time, can promote more efficient Hg removal as compared to that observed from units using non-CFB boilers with conventional pulverized coal combustors.

Other lignite-fired EGUs that utilize a CFB combustor also had generally lower Hg emission rates. For instance, the 2022 measured Hg rates reported in the 2024 Final Rule for the Red Hills facility in Mississippi, which also employs CFB combustors, was 1.7 lb/TBtu, compared to a range of 2.5 to 3.0 lb/TBtu for other lignite-fired EGUs in the southern U.S.¹²² Additionally, the lowest 2022 Hg emissions from lignite-fired facilities in North Dakota were found at Spiritwood Station, which also utilizes a CFB combustor. In revising the Hg emission standard for lignite-fired EGUs in the 2024 Final Rule, the EPA failed to evaluate the achievability of the revised Hg emission standard by affected sources that are not using the better performing CFB combustor technology.

In addition, the EPA assumed in the 2024 Final Rule that the revised Hg standard of 1.2 lb/TBtu could be met by injecting better performing powdered sorbents using existing sorbent injection systems without the need for equipment modifications or additions. However, industry commenters noted that existing equipment at lignite-fired power plants may not be able to achieve the 1.2 lb/TBtu Hg limit and that demonstration testing would be required to determine a sorbent dosage rate, guaranteed injection rate, and the emissions rate that can be achieved when considering the Hg content variability of the lignite. Commenters stated that modifications to Hg control systems may be required to meet the 1.2 lb/TBtu emission limit. The EPA did not consider such cost in the final analysis for the 2024 Final Rule.

In addition, the Agency did not sufficiently investigate the complex composition of lignite coals in the 2024 Final Rule, including the variability of the Hg content in the inlet fuel source and the corresponding reductions needed to comply with the 1.2 lb/TBtu Hg emission standard. In the 2023

proposed rule, the EPA explained how the halogen content of coal influences the oxidation state of Hg in the flue gas stream, and thus the partitioning of Hg into elemental Hg vapor, oxidized Hg vapor, or particle-bound Hg, which impacts the Hg control approaches.¹²³ Lignite and subbituminous coals both have a lower halogen content compared to bituminous coals, and the Hg in the flue gas from boilers firing those fuels tends to stay in the elemental vapor state, which is more challenging to control. The EPA noted that pre-halogenated (typically brominated) sorbents have been effectively utilized to control Hg emissions at power plants firing low-halogen content subbituminous coals. However, the EPA also noted that lignite coals tend to contain higher amounts of sulfur (more similar to some bituminous coals), which, under certain circumstances, can result in the production of sulfur trioxide (SO₃) in the flue gas stream. SO₃, in turn, is known to inhibit the effectiveness of some sorbents that are used for Hg control. The EPA acknowledged the challenges with higher sulfur content coals but noted that bituminous coal-fired power plants found ways to overcome those challenges—sometimes by utilizing newly developed sulfur-tolerant sorbents. However, while the EPA acknowledged the respective challenges that the halogen and sulfur contents of coal can have on Hg control in the 2024 Final Rule, the EPA failed to address the impact of lower halogen content coupled with higher sulfur content on Hg control for lignite-fired power plants. Subbituminous coals tend to have low contents of both halogen and sulfur, while bituminous coals tend to contain higher levels of both halogen and sulfur. In comparison, lignites tend to have low halogen content (similar to subbituminous coals) and higher sulfur content (similar to bituminous coals).

Commenters also provided data challenging the assumed inlet value of 25.0 lb/TBtu used in modeling in the 2024 Final Rule. For example, historical data indicate that lignite seams near the San Miguel plant in Texas result in coal feeds that have an average Hg inlet content of 34.0 lb/TBtu.¹²⁴ As a result, San Miguel would need to achieve an average control rate of 96.3 percent to meet the standard in the 2024 Final Rule, compared to an 87.8 capture percentage for the 4.0 lb/TBtu emission

limit.¹²⁵ Additionally, monthly fluctuations in Hg content could require even higher control levels at least half the time. Ignoring monthly variability not only leads to an underestimation of costs associated with Hg removal but also overlooks control device modifications and enhancements required to achieve pollution control levels exceeding 90 percent.

It was not necessary to revise the Hg limit for lignite-fired EGUs in the 2024 Final Rule. This revised emission standard was based on insufficient data, and furthermore, the EPA did not demonstrate that the high level of Hg removal it required was generally achievable for all lignite-fired units in the source category while taking into account the wide-ranging and highly variable Hg content of the various lignite fuels. In addition, the Agency failed to evaluate its achievability by affected sources that are not using CFB combustor technology and assumed the revised standard could be met by injecting better performing sorbents without equipment modifications. The EPA also did not sufficiently investigate the complex composition of lignite coals, including the variability of the Hg content in the inlet fuel source, and ignored monthly variability, leading to an underestimation of costs. For these reasons, the EPA is finalizing the repeal of the Hg emission limit for lignite-fired EGUs that was promulgated in the 2024 Final Rule—1.2 lb/TBtu—and reverting to the Hg emission limit—4.0 lb/TBtu—that was promulgated in the 2012 MATS Rule.

3. What key comments did we receive on the Hg emission standard for lignite-fired EGUs and what are our responses?

Comment: Some commenters agreed with the EPA's proposed reconsideration of the Twin Oaks Hg data that the EPA relied upon in the 2024 Final Rule. First, commenters agreed the performance tests were conducted over a limited operating period and not sufficient to establish a more stringent Hg emission standard continuously for all units. Commenters argued that this facility was not representative of the national fleet because lignite seams burned at Twin Oaks differ from lignite at North Dakota lignite facilities and at other Texas lignite facilities. Second, commenters agreed that the CFB boiler design at the Twin Oaks and Red Hills facilities promote more efficient Hg removal compared to units using other types of boilers.

¹²³ 88 FR 24875 (April 24, 2023).

¹²⁴ Document ID No. EPA-HQ-OAR-2018-0794-5965.

¹²⁵ Document ID No. EPA-HQ-OAR-2018-0794-5965.

¹²² *Id.* at 38548.

Other commenters disagreed with the EPA's proposed reconsideration of the Twin Oaks and Red Hills Hg data, arguing that the facilities' use of baghouses is an additional reason for highly effective Hg capture. These commenters asserted that while both facilities are equipped with ACI and would have very low SO₃ present in the flue gas due to high free lime content, the presence of a baghouse makes the ACI, as well as any intrinsic capture of fly ash, much more effective. These commenters stated that if an ESP was installed instead of a baghouse, Hg capture would be more difficult. However, commenters asserted that every lignite unit is already configured in a manner for potentially higher Hg capture. These commenters stated that lignite facilities equipped with baghouses include Antelope Valley, Coyote, Spiritwood, Twin Oaks, Oak Grove, and Red Hills, and that some of those facilities also have an upstream dry scrubber (Antelope Valley, Coyote, Spiritwood) that helps make Hg capture with ACI more effective. The remainder of the lignite facilities (Coal Creek, Leland Olds, Milton R Young, Limestone, Martin Lake, and San Miguel) installed ESPs followed by a wet FGD, which enable additional Hg capture beyond what is achieved with ACI because wet FGD removes oxidized Hg very efficiently.

These commenters further asserted that higher Hg capture is possible for lignite plants with pulverized coal boilers (*i.e.*, non-CFB units) and pointed to the Conemaugh power plant in Pennsylvania as an example. The Conemaugh facility is equipped with an ESP and wet FGD and burns bituminous coal. These commenters attempted to calculate the Hg content of coals burned at Conemaugh using EIA-923 data from 2016 to 2022, finding an average Hg content ranging from approximately 10 lb/TBtu to over 50 lb/TBtu with a standard deviation ranging from near zero to almost 40 lb/TBtu.¹²⁶ These commenters also asserted that most bituminous and subbituminous units receive coal from multiple mines and therefore face much greater variability in Hg content than lignite units, which are mine-mouth and only receive coal from one mine. Using the inferred Hg content information, commenters estimated that the Hg capture rate at the Conemaugh facility exceeded 95 percent every year, demonstrating that higher

Hg capture at lignite units with lower Hg variability is possible using this configuration.

Response: The EPA agrees that baghouses are another technology for efficient Hg capture. However, the Agency did not demonstrate that higher Hg removal is achievable for all lignite-fired units once the wide-ranging and highly variable Hg content of the various lignite fuels is taken into account. As noted in the 2024 Final Rule, bituminous coals from Pennsylvania exhibit large Hg content variability similar to that of lignite, but bituminous coals also have higher natural chlorine content than lignite coal, which aids in the Hg removal efficiency.¹²⁷ Therefore, the Agency does not agree with the commenters' example that a facility burning bituminous coal using a pulverized coal boiler demonstrates that a similar lignite-fired unit can achieve a similar level of Hg control.

Comment: Commenters argued that the EPA failed to adequately justify returning to the 2012 MATS Rule Hg emission standard for lignite-fired EGUs in the proposed rule, as power plants that burn lignite coal represent a disproportionately large share of Hg emissions across all coal-fired EGUs. Specifically, commenters cited the 2023 proposal, in which the EPA provided that 16 of the top 20 Hg-emitting EGUs were lignite-fired and that lignite EGUs were responsible for about 30 percent of all Hg emitted from all coal-fired EGUs in 2021, while generating about 7 percent of total 2021 MW-hours.¹²⁸ Commenters noted that the 2012 MATS Rule resulted in a 90 percent reduction of Hg from power plants, but few reductions came from plants that burn lignite coal. The commenters explained that lignite-fired EGUs are concentrated geographically in North Dakota and Texas, which increases the cumulative burden of such pollutants on surrounding and downwind vulnerable communities.

Response: The EPA took all relevant comments and information, including information referenced above, into consideration when deciding whether to finalize the proposed repeal. Since the 2024 Final Rule, the Agency obtained updated information on the fleet of power plants burning lignite coal, finding that the Martin Lake and Limestone facilities (both in Texas) are no longer permitted to burn lignite and are now subject to a 1.2 lb/TBtu Hg emission standard. As mentioned earlier in this preamble, the 2020 Residual Risk

Review found the residual risks due to emissions of air toxics to be acceptable from the coal- and oil-fired EGU source category and determined that the current NESHAP (as promulgated in the 2012 MATS Rule) provided an ample margin of safety to protect human health and prevent an adverse environmental effect. Risk from near-field deposition of Hg to subsistence fishers was evaluated, using a site-specific assessment of a lake near three lignite-fired facilities.¹²⁹ The results suggest that methylmercury (MeHg) exposure to subsistence fishers from lignite-fired units alone is below the RfD for MeHg neurodevelopmental toxicity or IQ loss, with an estimated hazard quotient (HQ) of 0.06. In general, the EPA believes that exposures at or below the RfD are unlikely to be associated with appreciable risk of deleterious effects. The EPA reaffirmed its 2020 Residual Risk Review, which showed that emissions of HAP from coal- and oil-fired power plants have been reduced such that residual risk is at an acceptable level and provides an ample margin of safety, in the 2024 Final Rule.¹³⁰

Comment: Many commenters agreed that the EPA did not appropriately consider costs for lignite EGUs to meet a revised Hg emission standard in the 2024 Final Rule. Commenters stated the cost to comply with the revised Hg emission standard depends on the amount and type of sorbent required and ACI equipment additions or modifications, and since the amount of sorbent needed to achieve a more stringent standard is unclear and unit-specific, the sorbent cost cannot be reliably calculated. Commenters also disagreed with the EPA's claim in the 2024 Final Rule that SO₃-tolerant sorbents could be used at lower feed rates to achieve greater Hg capture. Commenters stated that the EPA underestimated costs in the 2024 Final Rule by not considering the costs of modifications to the Hg control systems to meet a more stringent Hg emission standard, especially for units equipped with an ESP instead of a FF. Commenters stated that compliance costs cannot be accurately estimated because no lignite EGU has demonstrated that the revised Hg

¹²⁹ Document ID No. EPA-HQ-OAR-2018-0794-0070

¹³⁰ In the 2024 Final Rule, the EPA stated: "In the 2023 Proposal, the EPA determined not to reopen the 2020 Residual Risk Review, and accordingly did not propose any revisions to that review. As the EPA explained in the proposal, the EPA found in the 2020 RTR that risks from the Coal- and Oil-Fired EGU source category due to emissions of air toxics are acceptable and that the existing NESHAP provides an ample margin of safety to protect public health." 89 FR 38518 (May 7, 2024).

¹²⁶ The survey Form EIA-923 collects detailed electric power data—monthly and annually—on electricity generation, fuel consumption, fossil fuel stocks, and receipts at the power plant and prime mover level. <https://www.eia.gov/electricity/data/eia923/>.

¹²⁷ 89 FR 38543 (May 7, 2024).

¹²⁸ 88 FR 24876 (April 24, 2023).

emission standard can be met on a continuous basis. Commenters stated that these deficiencies in the Agency's cost analysis (e.g., failure to include annual capitalized costs for the Hg control system, updated sorbent costs, and costs based on theoretical sorbent usage) resulted, for example, in at least a \$2.6 million underestimate for Milton R Young Station's Unit 2.

Other commenters claimed that the EPA provided no evidence in the proposed rule, and did not appear to conclude, that costs of possible modifications to Hg control systems render the Hg standard either not "achievable" or not cost-effective. These commenters stated that although the EPA asserted in the proposed rule that it did not previously consider the cost of possible modifications to control systems to meet the revised Hg standard, the Agency had in fact considered these costs in the 2024 Final Rule and found them to be reasonable.¹³¹ One of these commenters quoted a portion of the 2024 Final Rule in which the commenter believed that the EPA considered the costs of potential control system modifications and found that the need for "significant additional capital investment is unlikely."¹³² Commenters asserted that the EPA stated in the 2024 Final Rule that the Agency expected sources to "be able to meet the revised emission standard using existing controls (e.g., using existing sorbent injection equipment)" and that "if site-specific conditions necessitate minor capital improvements to the ACI control technology, . . . any incremental capital cost would be small relative to ongoing sorbent costs accounted for in this analysis."¹³³

Response: The EPA agrees with the commenters asserting that the Agency did not appropriately consider costs associated with Hg removal and overlooked costs for control device modification and enhancement required to achieve pollution control levels exceeding 90 percent within the 2024 Final Rule. In the 2024 Final Rule, the EPA noted that pre-halogenated (typically brominated) and sulfur-tolerant sorbents have effectively utilized to control Hg emissions at power plants firing low-halogen subbituminous coals. However, in the 2024 Final Rule, the EPA did not consider that the SO₃-tolerant sorbents had not been extensively tested on lignite-fired EGUs and thus the feed

rates and associated costs are uncertain and therefore disagrees with those commenters that asserted costs for these sorbents are reasonable. Since subbituminous coals tend to have low content of both halogen and sulfur and bituminous coals tend to contain higher levels of both halogen and sulfur, whereas lignites generally have the combined characteristics of low halogen content and higher sulfur content, the EPA disagrees with those commenters that asserted associated costs to achieve greater Hg capture in lignite-fired EGUs were properly considered in the 2024 Final Rule.

IV. Comments and Responses on the Relevance of Residual Risk to Technology Reviews Under CAA Section 112(d)(6)

A. What did the EPA propose and solicit comment on regarding the relevance of residual risk to technology reviews under CAA section 112(d)(6)?

The EPA is finalizing the position that the Agency may consider the results of the one-time residual risk review requirement under CAA section 112(f)(2) in determining whether it is "necessary" to revise standards at the conclusion of subsequent CAA section 112(d)(6) technology reviews. Under CAA section 112(d)(6), the EPA is required "to review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section no less often than every 8 years" (emphasis added). As noted in section II.A.1 of this preamble, the breadth of the term "necessary" in CAA section 112(d)(6) authorizes the EPA to consider the costs of revising standards in addition to the emissions-reduction potential of developments in practices, processes, and control technologies. Given the high costs and potential technical feasibility concerns with implementing the revised standards promulgated in the 2024 Final Rule, the EPA proposed to find that the 2024 revisions were not "necessary" under CAA section 112(d)(6) and solicited comment on whether and how the extent of further meaningful risk reduction opportunities should be considered in making that CAA section 112(d)(6) determination (Question #8). As explained in section II of this preamble, the EPA found in its 2020 Residual Risk Review that the residual risks due to HAP emissions from this source category are acceptable and determined that the current NESHP (as promulgated in the 2012 MATS Rule) provided an ample margin of safety to

protect public health and prevent an adverse environmental effect. The EPA reaffirmed the 2020 Final Rule, and did not reopen any of the underlying findings or conclusions of the one-time residual risk review requirement for MATS, in the 2024 Final Rule.¹³⁴

B. What is the EPA finalizing regarding the relevance of residual risk to technology reviews under CAA section 112(d)(6)?

As previewed in section III.A of this preamble, the EPA concludes that subsequent technology reviews under CAA section 112(d)(6) may consider the results of the one-time residual risk review requirement under CAA section 112(f)(2) in determining whether revisions are "necessary." Specifically, the EPA will generally place greater weight on the cost of revising standards when the results of the one-time residual risk review requirement indicate that cancer risk from HAP emissions are less than the statute's aspirational goal of one in one million. Under those circumstances, revisions will generally be "necessary" only when costs are at the low end of the range of acceptability. This interpretation follows from the term "necessary" in CAA section 112(d)(6), which gives the Agency discretion to consider relevant factors and information, including information in the record for the NESHP under review.¹³⁵ It is also consistent with the risk thresholds that Congress wrote into the statute, including the requirement to promulgate additional standards when cancer risk exceeds the aspirational goal of one in one million and the

¹³⁴ See 89 FR 38518 (May 7, 2024). The results of the risk analysis indicated that both the actual and allowable inhalation cancer risk to the individual most exposed was well below 100-in-1 million, which is the EPA's presumptive limit of acceptability under the Benzene NESHP. The results of the chronic inhalation cancer risk assessment based on actual emissions, as shown in Table 2 of this preamble, indicated that the estimated maximum individual lifetime cancer risk (cancer MIR) was 9-in-1 million, with nickel emissions from certain oil-fired EGUs as the major contributor to the risk. Approximately 193,000 people were estimated to have cancer risks at or above 1-in-1 million from HAP emitted from four facilities in this source category—all from oil-fired sources in Puerto Rico. However, the 2024 Final Rule only required controls for certain types of coal-fired EGUs and would not impact emissions from these oil-fired facilities.

¹³⁵ *LEAN*, 955 F.3d at 1097 (parenthetical in CAA section 112(d)(6) points to non-exhaustive list of considerations); see also *Michigan*, 576 U.S. at 752–53 (the term "appropriate and necessary" in CAA section 112(n)(1) directs agency to consider all relevant factors in exercising discretion); *Nat'l Ass'n for Surface Finishing*, 795 F.3d at 9–11 (discussing the EPA's discretion to consider relevant information when determining relevant information is "necessary"); *Ass'n of Battery Recyclers*, 716 F.3d at 673–74 (similar).

¹³¹ Document ID No. EPA–HQ–OAR–2018–0794–7609 (citing 89 FR 38508 (May 7, 2024)).

¹³² *Id.* (citing 89 FR 38549 (May 7, 2024)).

¹³³ *Id.*

presumptive unacceptability threshold of 100 in one million expressly incorporated as part of the Benzene NESHAP approach.¹³⁶

Commenters provided supportive and opposing arguments as to whether a technology review conducted under CAA section 112(d)(6) should take into consideration whether any meaningful risk reduction would be obtained from further reducing HAP emissions under the technology review given the results of the residual risk review. The EPA has taken these comments into account in finalizing its position on the question and summarizes and responds to many of the most significant comments in the following section. Additional discussion, including further comment summaries and responses, are available in the Response to Comment document available in the docket for this rule.

C. What key comments did the EPA receive regarding the relevance of residual risk to technology reviews under CAA section 112(d)(6), and what are our responses?

Comment: Commenters agreed that the EPA should consider the potential for and materiality of risk reductions when conducting a CAA section 112(d)(6) technology review, citing multiple reasons. First, commenters argued that CAA section 112(d)(6) allows the EPA to revise standards only when “necessary,” which should be determined by assessing whether new regulations protect human health and the environment. Commenters stated that in *Michigan*, the Supreme Court explained that the EPA must consider costs when it evaluates benefits in deciding whether the 2012 MATS Rule was “appropriate and necessary,” and that case should similarly require the Agency to conduct a cost-benefit analysis to any new revisions under CAA section 112(d)(6). Commenters listed previous rules where the Agency used the lack of meaningful risk reduction as a factor in its cost analysis, such as the Industrial Process Cooling Towers NESHAP RTR,¹³⁷ Petroleum Refineries NESHAP RTR,¹³⁸ Halogenated Solvent Cleaning NESHAP

reconsideration proposal,¹³⁹ and Organic Hazards Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry NESHAP RTR.¹⁴⁰ Commenters also noted that in the RTR for the Coke Oven Batteries NESHAP, the EPA stated generally that findings concerning risk that the EPA makes in a section 112(f)(2) determination may be relevant in making any subsequent 112(d)(6) determinations for the related 112(d) standard.¹⁴¹

Second, commenters noted that the residual risk of HAP emissions from coal-fired EGUs are minimal under the MACT standards from the 2012 MATS Rule. Specifically, commenters noted that the EPA’s 2020 Residual Risk Review found that the maximum lifetime cancer risk from coal-fired EGUs ranged from 0.002 to 0.344 in 1 million, which, commenters asserted, are orders of magnitude below what commenters further asserted is Congress’s threshold for deregulating the source category. Commenters argued that further reducing cancer risks that are already less than one in one million yields negligible benefits, if any.

Other commenters disagreed that the EPA should consider residual risk during a CAA section 112(d)(6) technology review, arguing that the proposed rule misconstrues the technology review process under CAA section 112(d)(6) and fails to apply the best reading of the statute. These commenters stated that the EPA must review any new developments in control technologies and explain why those new developments make it necessary to adopt new standards. These commenters stated that the proposed rule is arbitrary and capricious because the EPA failed to consider any developments in practices, processes, and control technologies in finding that rescission is necessary. In the proposed rule, the Agency stated that “[g]iven the high costs and potential feasibility concerns with implementing the revised standards . . . the 2024 changes were not necessary under CAA section 112(d)(6).”¹⁴² However, these commenters argued that the EPA added

no new information or analysis concerning developments in practices, processes, and control technologies—the rulemaking record is essentially identical to that underlying the 2024 Final Rule, as the EPA recognized in its 2025 RIA. Instead, these commenters argued, the EPA now determines that the 2024 changes were not necessary in a conclusory manner, only citing changes in the Administrator’s policy preferences at the EPA as “developments” rather than citing any factual developments in practices, processes, or control technologies at emissions sources.

Lastly, these commenters claimed that CAA section 112(d)(6) does not allow the EPA to withdraw revised standards based on its claim that otherwise achievable controls produce no “meaningful risk reduction.” These commenters also argued that the EPA provided no reasonable basis to conclude that the 2012 MATS Rule still provides the maximum degree of emission reduction achievable under CAA section 112(d)(2), instructing the EPA to “tak[e] into account developments in practices, processes, and control technologies.” These commenters asserted that the EPA may not decline to make otherwise “necessary” revisions based on its appraisal of risk reduction.

Response: The EPA agrees that the Agency has an independent statutory authority and obligation to conduct technology reviews every 8 years separate from the EPA’s obligation to conduct a one-time residual risk review within 8 years of setting the MACT. The D.C. Circuit has recognized the CAA section 112(d)(6) technology review and CAA section 112(f)(2) residual risk review are “distinct, parallel analyses” that the EPA undertakes “[s]eparately.”¹⁴³ It would be inconsistent with the text, structure, and legislative history of the CAA for the EPA to conclude that Congress intended the statute’s technology-based approach to be sidelined after the Agency concludes the risk review, particularly because technology reviews, unlike the residual risk review, must be completed every 8 years on an ongoing basis. In the past, the EPA has occasionally determined that additional controls were warranted under technology reviews pursuant to CAA section 112(d)(6) although additional standards were not necessary to maintain an ample margin of safety under CAA

¹³⁶ CAA section 112(f)(2)(B), 42 U.S.C. 7412(f)(2)(B).

¹³⁷ *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*, 71 FR 17729, 17731–32 (April 7, 2006).

¹³⁸ *National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries*, 72 FR 50716, 50730 (September 4, 2007).

¹³⁹ *National Emission Standards for Hazardous Air Pollutants for Halogenated Solvent Cleaning*, 73 FR 62384, 62404 (October 20, 2008).

¹⁴⁰ *National Emission Standards for Hazardous Air Pollutants for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry*, 71 FR 76603, 76606 (December 21, 2006).

¹⁴¹ *National Emission Standards for Coke Oven Batteries*, 70 FR 19992, 20009 (April 15, 2005).

¹⁴² 90 FR 25544 (June 17, 2025).

¹⁴³ *Nat’l Ass’n for Surface Finishing*, 795 F.3d at 5.

section 112(f)(2).¹⁴⁴ The EPA has also previously stated that it “disagree[s] with the view that a determination under CAA section 112(f) of an [ample margin of safety] and no adverse environmental effects alone will, in all cases, cause us to determine that a revision is not necessary under CAA section 112(d)(6).”¹⁴⁵

However, the EPA also agrees with commenters’ assertions that costs should be considered in relation to potential benefits when evaluating whether revisions are “necessary” under CAA section 112(d)(6). That concept is inherent in the EPA’s consideration of standard cost metrics, including cost effectiveness expressed as cost per ton of HAP emissions abated. HAP emissions figures are important because of the health and environmental impacts they represent, and it is reasonable to consider such impacts when determining whether to regulate. As noted earlier in this preamble, the EPA has long evaluated cost effectiveness in the context of particular HAP because different HAPs present different physical and risk characteristics. That concept is also inherent in the nature of cost consideration. As the Supreme Court explained in *Michigan*, “[c]onsideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions,” and it would be irrational “to impose billions of dollars in economic costs in return for a few

dollars in health or environmental benefits.”¹⁴⁶

As explained in section III.A of this preamble, there are circumstances in which the EPA may consider risk in a CAA section 112(d)(6) rulemaking as part of its determination of whether revisions to emission standards are “necessary.” The EPA concludes that in the present rulemaking, it may consider the small remaining risk from the non-HG HAP metals emitted from the source category—the cancer risks are less than one in one million for every coal-fired EGU in the source category—in assessing whether the costs of controls for those pollutants are too high, such that a revision to the standards based on those controls is not “necessary.” This conclusion is consistent with previous rules under CAA section 112(d)(6) in which the EPA has considered risk.

V. What is the rationale for other final decisions and amendments from the reevaluation of the 2024 Final Rule?

In 2020, the EPA finalized electronic data reporting requirements of MATS, including requiring data availability in Extensible Markup Language (XML) format and amending the reporting and recordkeeping requirements associated with performance stack tests, PM and HCl CEMS, and PM CPMS.¹⁴⁷ As a result, sources are required to use the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool to submit all required reports. The deadline to meet changes in electronic reporting was December 31, 2023, which has since been tentatively extended to the 1st quarter of 2026.

As part of this rulemaking, the EPA is finalizing two minor technical, non-substantive clarifications to the relevant electronic data reporting requirements, such as (i) removing references to “ECMPS” and replacing with “ECMPS Reporting Tool” and (ii) revising the XML file format requirement to any file format specified by the Administrator. The main effect of these minor technical clarifications is that they make clear that the EPA will accept MATS reports in both XML and PDF (or other) formats, as opposed to only XML. These minor technical clarifications will better clarify and enable the reporting of electronic compliance data, in light of the fact that some reporting aspects are not supported by XML.

The EPA is making these non-substantive clarifications including under the “good cause” exception to notice-and-comment rulemaking incorporated by reference into the

statute in CAA section 307. Under section 553(b)(B) of the Administrative Procedure Act, an agency may forego notice-and-comment rulemaking when it “for good cause find[s]” that providing notice and an opportunity for comment would be “impracticable, unnecessary, or contrary to the public interest.” Here, providing notice is “unnecessary” because of the minor, non-substantive nature of the technical clarifications.¹⁴⁸ As these changes do not alter the substantive reporting requirements, there is good cause to make them without prior notice and comment. The Agency emphasizes that these non-substantive clarifications are separate and independent from any other change made in this final rule.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders is available at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant action under E.O. 12866 section 3(f)(1) that was submitted to the OMB for review. Any changes made in response to E.O. 12866 review have been documented in the docket. The EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis, *Regulatory Impact Analysis for the Final Repeal of Amendments to National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units*, is available in the docket.¹⁴⁹

We present the estimated present values (PV) and equivalent annualized values (EAV) of the estimated cost savings of repealing the 2024 Final Rule in 2024 dollars over the 2028 to 2037 period, discounted to 2025. In addition, the Agency presents the assessment for specific snapshot years, consistent with historic practice. These snapshot years are 2028, 2030, and 2035. The power industry’s cost savings are represented in this analysis as the change in electric power generation costs due to the repeal of the 2024 Final Rule requirements. In

¹⁴⁴ See, e.g., *National Emission Standards for Hazardous Air Pollutants: Refractory Products Manufacturing Residual Risk and Technology Review*, 86 FR 66045 (November 19, 2021); *National Emission Standards for Hazardous Air Pollutants: Site Remediation Residual Risk and Technology Review*, 85 FR 41680 (July 10, 2020); *National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) Residual Risk and Technology Review*, 85 FR 40740, 40745 (July 7, 2020); *National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards Residual Risk and Technology Review for Ethylene Production*, 85 FR 40386, 40389 (July 6, 2020); *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*, 82 FR 47328 (October 11, 2017); *National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards; and Manufacture of Amino/Phenolic Resins*, 79 FR 60898, 60901 (October 8, 2014).

¹⁴⁵ *National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins; Marine Tank Vessel Loading Operations; Pharmaceuticals Production; and the Printing and Publishing Industry*, 76 FR 22566, 22577 (April 21, 2011).

¹⁴⁶ 576 U.S. at 752–53.

¹⁴⁷ 85 FR 55744 (September 9, 2020).

¹⁴⁸ See *Mack Trucks, Inc. v. EPA*, 682 F.3d 87, 94 (D.C. Cir. 2012) (“This prong of the good cause inquiry is ‘confined to those situations in which the administrative rule is a routine determination, insignificant in nature and impact, and inconsequential to the industry and to the public.’”) (quoting *Util. Solid Waste Activities Grp. v. EPA*, 236 F.3d 749, 755 (D.C. Cir. 2001)).

¹⁴⁹ Docket ID No. EPA–HQ–OAR–2018–0794.

simple terms, these cost savings are an estimate of the decreased power industry expenditures resulting from the repeal of the 2024 Final Rule requirements.

Under this final repeal, the 2024 Final Rule would no longer reduce emissions of Hg and non-Hg HAP metals as projected in the 2024 MATS RTR RIA.¹⁵⁰ The potential benefits from reductions of HAP were not able to be monetized in the 2024 MATS RTR RIA, nor were potential impacts from the 2024 Final Rule requirement to use PM CEMS for compliance demonstration. See section I.A for more details of the final repeal of requirements.

Table 4 presents the estimated cost savings of this final action in 2024 dollars discounted to 2025. This table presents the PV and EAV of these estimates discounted at 3 percent and 7 percent.

TABLE 4—PRESENT VALUE AND EQUIVALENT ANNUALIZED VALUE OF COMPLIANCE COST SAVINGS ESTIMATES OF THE FINAL REPEAL FROM 2028–2037

[Millions of 2024\$, Discounted to 2025]

	3 Percent discount rate	7 Percent discount rate
Present Value	670	490
Equivalent Annualized Value	78	69

Note that, unlike the proposal, the compliance cost analysis for the final rule reflects the recent Presidential Proclamations that temporarily exempt certain stationary sources from compliance with the 2024 MATS RTR requirements. Additionally, this updated analysis incorporates recent updates to state and federal legislation affecting the power sector, including the One Big Beautiful Bill Act (OBBBA) of 2025, and also accounts for large projected increases in electricity demand stemming from data centers and Artificial Intelligence applications.

The EPA is obligated to present the agency’s best scientific understanding and the implications of that science when developing policies and regulations. However, the EPA’s analytical practices may not have presented the full range of uncertainties

and associated confidence level regarding the potential benefit estimates from reduction in exposure from fine particulate matter (PM_{2.5}) and ozone. In addition, the science regarding the exposure, health effects from exposure and valuation of reduction in health effect are evolving with better data and methods, especially at low concentrations of PM and ozone. The EPA’s use of benefit per ton (BPT) monetized values introduces additional uncertainty. Although developed as a screening tool when full-form photochemical modeling was not feasible, the BPT approach reduces complex spatial and atmospheric relationships and may be more suited to model emissions that are geographically more uniform and species better mixing, thereby adding uncertainty associated with those estimates. Some of the sources of uncertainties include the set of assumptions used in projecting the health impact of reducing particulate matter. These projections are based on a series of models that take into account emissions changes, resulting distributions of changes in ambient air quality, the estimated reductions in health effects from changes in exposure, and the composition of the population that will benefit from the reduced exposure. Each component includes assumptions, each with varying degrees of uncertainty.

In addition, the EPA historically provided point estimates rather than just ranges of emission-related effects or only quantifying emissions when monetizing proved to be too uncertain. Therefore, to address these concerns, the EPA is refraining in providing primary estimates resulting from changes in PM_{2.5} and ozone exposure resulting from changes in NO_x emissions but will continue to quantify the emissions until the Agency is confident enough in the modeling to robustly monetize those impacts.

A more robust description of the benefits and cost of this rulemaking is contained in the RIA, available in the docket, and is consistent with Executive Order 12866.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is considered an Executive Order 14192 deregulatory action. Details on the estimated cost savings of this final rule is available in the EPA’s analysis of the potential costs and benefits associated with this action.

C. Paperwork Reduction Act (PRA)

The information collection activities in this rule have been submitted for approval to the Office of Management

and Budget (OMB) under the PRA. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2137.13. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060–0567. The information collection activities in this rule include performance testing, continuous emission monitoring, notifications and periodic reports, recording information, monitoring and the maintenance of records. The information generated by these activities will be used by the EPA to ensure that affected facilities comply with the emission limits and other requirements. Records and reports are necessary to enable delegated authorities to identify affected facilities that may not be in compliance with the requirements. Based on reported information, delegated authorities will decide which units and what records or processes should be inspected. The recordkeeping requirements require only the specific information needed to determine compliance. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). The burden and cost estimates below represent the total burden and cost for the information collection requirements of the NESHAP for coal- and oil-fired EGUs, not just the burden associated with the amendments in this final rule. The incremental ICR cost savings associated with the final repeal of these amendments is \$29.8 million per year.

Respondents/affected entities: The respondents are owners or operators of coal- and oil-fired EGUs. The NAICS codes for the coal- and oil-fired EGU industry are 221112, 221122, and 921150.

Respondent’s obligation to respond: Mandatory per 42 U.S.C. 7414 *et seq.*

Estimated number of respondents: 201 per year. Each facility is a respondent, and some facilities have multiple EGUs.

Frequency of response: The frequency of responses varies depending on the burden item. Responses include daily calibrations, monthly recordkeeping activities, semiannual compliance reports, and annual reports.

Total estimated burden: 191,000 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$76,800,000 (per year); includes \$24,800,000 annualized

¹⁵⁰ “Regulatory Impact Analysis for the Final National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review” (Ref. EPA–452/R–24–005). Document ID No. EPA–HQ–OAR–2018–0794–6966.

labor costs, \$4,500,000 annualized capital costs, and 47,500,000 annualized operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

D. Regulatory Flexibility Act (RFA)

The EPA certifies that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the EPA concludes that the impact of concern for this rule is any significant adverse economic impact on small entities, and the Agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because of the overall cost savings for and low impact on small entities. This final action will lead to reduction in EAV of costs over the 2028 to 2037 timeframe of about \$78 and \$69 million per year at discount rates of three percent and seven percent, respectively. A small entity analysis was conducted, reflecting updated modeling assumptions, and focusing on analysis year 2030, when the two-year exemptions will end for all affected units and full compliance of the 2024 MATS RTR requirements would be expected. This analysis identified one unit that is estimated to experience a fuel use and electricity generation change of at least one percent and is own by an entity that is considered small. This small entity is not estimated to have a significant change in cost relative to its revenue as a result of the final repeal. Consequently, the EPA expects that this deregulatory action will relieve overall regulatory burden for facilities that, absent this final action, would be affected by the provisions from the 2024 Final Rule.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more (adjusted for inflation) as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The costs involved in this action are estimated not to exceed \$100 million or

more (adjusted for inflation) in any one year.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. 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, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to the action.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA consulted with Tribal officials during the development of this action. A summary of the two consultations with the Lake Paiute Tribe and Summit Lake Tribe is provided in the docket.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because the EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children. Emissions from this source category include HAP like Hg and lead, which are known developmental toxicants. However, the 2020 residual risk assessment showed all modeled exposures to HAP from these facilities to be below levels of public health concern (85 FR 31286). Therefore, this action does not present or address disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a “significant energy action” because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The 2024 MATS RTR RIA projected that the 2024 Final Rule would have minimal impacts on average retail electricity prices across the contiguous U.S., coal-fired electricity generation, natural gas-fired electricity generation, and utility power sector delivered natural gas prices. Details of the projected energy impacts are presented in section 2 of the RIA, which is in the rulemaking docket.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This rulemaking does not involve new or updated technical standards.

ASTM D6348–03 (Reapproved 2010), ASTM D6784–16, and ANSI/ASME PTC 19.10–1981 continue to be approved for table 5 to subpart UUUUU. ANSI/ASME PTC 19.10–1981 is removed from table 4 to subpart UUUUU.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action meets the criteria set forth in 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

- 1. The authority citation for part 63 continues to read as follows:

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

Subpart A—General Provisions

- 2. Amend § 63.14 by revising paragraph (f)(1) to read as follows:

§ 63.14 Incorporation by reference.

(f) * * *

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981; §§ 63.116(c) and (h); 63.128(a); 63.145(i); 63.309(k); 63.365(b); 63.457(k); 63.490(g); 63.772(e) and (h); 63.865(b); 63.997(e); 63.1282(d) and (g); 63.1450(a), (b), (d), (e), (g); 63.1625(b); table 5 to subpart EEEE; §§ 63.3166(a); 63.3360(e); 63.3545(a); 63.3555(a); 63.4166(a); 63.4362(a); 63.4766(a); 63.4965(a); 63.5160(d); table 4 to subpart UUUU; tables 5, 16, and 17 to subpart XXXX; table 3 to subpart YYYY; table 4 to subpart AAAAA; § 63.7322(b); table 5 to subpart DDDDD; §§ 63.7822(b); 63.7824(e); 63.7825(b); 63.8000(d); table 4 to subpart JJJJJ; table 4 to subpart KKKKK; §§ 63.9307(c); 63.9323(a); 63.9621(b) and (c); table 4 to subpart SSSSS; table 5 of subpart UUUUU; table 1 to subpart ZZZZZ; §§ 63.11148(e); 63.11155(e); 63.11162(f); 63.11163(g); table 4 to subpart JJJJJ; § 63.11410(j); 63.11551(a); 63.11646(a); 63.11945.

* * * * *

Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units

■ 3. Amend § 63.9991 by revising paragraph (a)(2) to read as follows:

§ 63.9991 What emission limitations, work practice standards, and operating limits must I meet?

(a) * * *

(2) You must meet each operating limit in table 4 to this subpart that applies to your EGU.

* * * * *

■ 4. Amend § 63.10000 by revising paragraphs (c)(1)(i) and (iv), (c)(2)(i) and (ii), and (d)(5)(i) to read as follows:

§ 63.10000 What are my general requirements for complying with this subpart?

* * * * *

(c) * * *

(1) * * *

(i) For a coal-fired or solid oil-derived fuel-fired EGU or IGCC EGU, you may conduct initial performance testing in accordance with § 63.10005(h), to determine whether the EGU qualifies as a low emitting EGU (LEE) for one or more applicable emission limits, except as otherwise provided in paragraphs (c)(1)(i)(A) and (B) of this section:

(A) Except as provided in paragraph (c)(1)(i)(C) of this section, you may not pursue the LEE option if your coal-fired,

IGCC, or solid oil-derived fuel-fired EGU is equipped with a main stack and a bypass stack or bypass duct configuration that allows the effluent to bypass any pollutant control device.

(B) You may not pursue the LEE option for Hg if your coal-fired, solid oil-derived fuel-fired EGU or IGCC EGU is new.

(C) You may pursue the LEE option provided that:

(1) Your EGU's control device bypass emissions are measured in the bypass stack or duct or your control device bypass exhaust is routed through the EGU main stack so that emissions are measured during the bypass event; or

(2) Except for hours during which only clean fuel is combusted, you bypass your EGU control device only during emergency periods for no more than a total of 2 percent of your EGU's annual operating hours; you use clean fuels to the maximum extent possible during an emergency period; and you prepare and submit a report describing the emergency event, its cause, corrective action taken, and estimates of emissions released during the emergency event. You must include these emergency emissions along with performance test results in assessing whether your EGU maintains LEE status.

* * * * *

(iv) If your coal-fired or solid oil derived fuel-fired or IGCC EGU does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a particulate matter continuous parametric monitoring system (PM CPMS), a PM CEMS, or, for an existing EGU, compliance performance testing repeated quarterly.

* * * * *

(2) * * *

(i) For an existing liquid oil-fired unit, you may conduct the performance testing in accordance with § 63.10005(h), to determine whether the unit qualifies as a LEE for one or more pollutants. For a qualifying LEE for Hg emissions limits, you must conduct a 30-day performance test using Method 30B at least once every 12 calendar months to demonstrate continued LEE status. For a qualifying LEE of any other applicable emissions limits, you must conduct a performance test at least once every 36 calendar months to demonstrate continued LEE status.

(ii) If your liquid oil-fired unit does not qualify as a LEE for total HAP

metals (including mercury), individual metals (including mercury), or filterable PM you must demonstrate compliance through an initial performance test and you must monitor continuous performance through either use of a PM CPMS, a PM CEMS, or, for an existing EGU, performance testing conducted quarterly.

* * * * *

(d) * * *

(5) * * *

(i) Installation of the CMS or sorbent trap monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See § 63.10010(a) for further details. For PM CPMS installations, follow the procedures in § 63.10010(h).

* * * * *

■ 5. Amend § 63.10005 by revising paragraph (a)(1), introductory text of paragraph (b), paragraph (c), and introductory text of paragraphs (d)(2), (h), and (h)(1) to read as follows:

§ 63.10005 What are my initial compliance requirements and by what date must I conduct them?

(a) * * *

(1) To demonstrate initial compliance with an applicable emissions limit in table 1 or 2 to this subpart using stack testing, the initial performance test generally consists of three runs at specified process operating conditions using approved methods. If you are required to establish operating limits (see paragraph (d) of this section and table 4 to this subpart), you must collect all applicable parametric data during the performance test period. Also, if you choose to comply with an electrical output-based emission limit, you must collect hourly electrical load data during the test period.

* * * * *

(b) *Performance testing requirements.* If you choose to use performance testing to demonstrate initial compliance with the applicable emissions limits in tables 1 and 2 to this subpart for your EGUs, you must conduct the tests according to § 63.10007 and table 5 to this subpart. Notwithstanding the preceding requirements, when table 5 specifies the use of isokinetic EPA test Method 5, 5D, 5I, 26A, or 29 for a stack test, if concurrent measurement of the stack gas flow rate or moisture content is needed to convert the pollutant concentrations to units of the standard, separate determination of these parameters using EPA test Method 2 or EPA test Method

4 is not necessary. Instead, the stack gas flow rate and moisture content can be determined from data that are collected during the EPA test Method 5, 5D, 5I, 6, 26A, or 29 test (e.g., pitot tube (delta P) readings, moisture collected in the impingers). For the purposes of the initial compliance demonstration, you may use test data and results from a performance test conducted prior to the date on which compliance is required as specified in § 63.9984, provided that the following conditions are fully met:

* * * * *

(c) *Operating limits.* In accordance with § 63.10010 and table 4 to this subpart, you may be required to establish operating limits using PM CPMS and using site-specific monitoring for certain liquid oil-fired units as part of your initial compliance demonstration.

(d) * * *

(2) For affected coal-fired or solid oil-derived fuel-fired EGUs that demonstrate compliance with the applicable emission limits for total non-mercury HAP metals, individual non-mercury HAP metals, total HAP metals, individual HAP metals, or filterable PM listed in table 1 or 2 to this subpart using initial performance testing and continuous monitoring with PM CPMS:

* * * * *

(h) *Low emitting EGUs.* The provisions of this paragraph (h) apply to pollutants with emissions limits from new EGUs except Hg and to all pollutants with emissions limits from existing EGUs. You may pursue this compliance option unless prohibited pursuant to § 63.10000(c)(1)(i).

(1) An EGU may qualify for low emitting EGU (LEE) status for Hg, HCl, HF, filterable PM, total non-Hg HAP metals, or individual non-Hg HAP metals (or total HAP metals or individual HAP metals, for liquid oil-fired EGUs) if you collect performance test data that meet the requirements of this paragraph (h) and if those data demonstrate:

* * * * *

■ 6. Amend § 63.10006 by revising paragraph (a) to read as follows:

§ 63.10006 When must I conduct subsequent performance tests or tune-ups?

(a) For liquid oil-fired, solid oil-derived fuel-fired and coal-fired EGUs and IGCC units using PM CPMS to monitor continuous performance with an applicable emission limit as provided for under § 63.10000(c), you must conduct all applicable performance tests according to table 5 to

this subpart and § 63.10007 at least every year.

* * * * *

■ 7. Amend § 63.10007 by revising paragraphs (a)(3) and (c) to read as follows:

§ 63.10007 What methods and other procedures must I use for the performance tests?

(a) * * *

(3) For establishing operating limits with particulate matter continuous parametric monitoring system (PM CPMS) to demonstrate compliance with a PM or non-Hg metals emissions limit, operate the unit at maximum normal operating load conditions during the performance test period. Maximum normal operating load will be generally between 90 and 110 percent of design capacity but should be representative of site specific normal operations during each test run.

* * * * *

(c) If you choose the filterable PM method to comply with the PM emission limit and demonstrate continuous performance using a PM CPMS as provided for in § 63.10000(c), you must also establish an operating limit according to § 63.10011(b), § 63.10023, and tables 4 and 6 to this subpart. Should you desire to have operating limits that correspond to loads other than maximum normal operating load, you must conduct testing at those other loads to determine the additional operating limits.

* * * * *

■ 8. Amend § 63.10010 by revising the introductory text of paragraphs (a), (h), and (i) to read as follows:

§ 63.10010 What are my monitoring, installation, operation, and maintenance requirements?

(a) Flue gases from the affected units under this subpart exhaust to the atmosphere through a variety of different configurations, including but not limited to individual stacks, a common stack configuration or a main stack plus a bypass stack. For the CEMS, PM CPMS, and sorbent trap monitoring systems used to provide data under this subpart, the continuous monitoring system installation requirements for these exhaust configurations are as follows:

* * * * *

* * * * *

(h) If you use a PM CPMS to demonstrate continuous compliance with an operating limit, you must install, calibrate, maintain, and operate the PM CPMS and record the output of

the system as specified in paragraphs (h)(1) through (5) of this section.

* * * * *

(i) If you choose to comply with the PM filterable emissions limit in lieu of metal HAP limits, you may choose to install, certify, operate, and maintain a PM CEMS and record and report the output of the PM CEMS as specified in paragraphs (i)(1) through (8) of this section. Compliance with the applicable PM emissions limit in table 1 or 2 to this subpart is determined on a 30-boiler operating day rolling average basis.

* * * * *

■ 9. Amend § 63.10011 by revising paragraph (b) to read as follows:

§ 63.10011 How do I demonstrate initial compliance with the emissions limits and work practice standards?

* * * * *

(b) If you are subject to an operating limit in table 4 to this subpart, you demonstrate initial compliance with HAP metals or filterable PM emission limit(s) through performance stack tests and you elect to use a PM CPMS to demonstrate continuous performance, or if, for a liquid oil fired EGU, and you use quarterly stack testing for HCl and HF plus site-specific parameter monitoring to demonstrate continuous performance, you must also establish a site-specific operating limit, in accordance with § 63.10007 and table 6 to this subpart. You may use only the parametric data recorded during successful performance tests (i.e., tests that demonstrate compliance with the applicable emissions limits) to establish an operating limit.

* * * * *

■ 10. Amend § 63.10020 by revising paragraph (e)(3)(i) introductory text to read as follows:

§ 63.10020 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(e) * * *

(3) * * *

(i) Except for an EGU that uses PM CEMS or PM CPMS to demonstrate compliance with the PM emissions limit, or that has LEE status for filterable PM or total non-Hg HAP metals for non-liquid oil-fired EGUs (or HAP metals emissions for liquid oil-fired EGUs), or individual non-mercury metals CMS, you must:

* * * * *

■ 11. Amend § 63.10021 by revising paragraph (c) introductory text and paragraph (f) to read as follows:

§ 63.10021 How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?

* * * *

(c) If you use PM CPMS data to measure compliance with an operating limit in table 4 to this subpart, you must record the PM CPMS output data for all

periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps, PM

concentration, raw data signal) on a 30 operating day rolling average basis, updated at the end of each new boiler operating day. Use the following equation to determine the 30-boiler operating day average.

Equation 9 to Paragraph (c)
Introductory Text

$$30 \text{ boiler operating day average} = \frac{\sum_{i=1}^n Hpv_i}{n} \quad (\text{Eq. 9})$$

Where:

Hpv_i is the hourly parameter value for hour i and n is the number of valid hourly parameter values collected over 30-boiler operating days.

* * * *

(f) You must submit the applicable reports and notifications required under § 63.10031(a) through (k) to the Administrator electronically, using EPA's Emissions Collection and Monitoring Plan System (ECMPS) reporting tool. If the final date of any time period (or any deadline) for any of these submissions falls on a weekend or a Federal holiday, the time period shall be extended to the next business day. Moreover, if the EPA Host System supporting the ECMPS reporting tool is offline and unavailable for submission of reports for any part of a day when a report would otherwise be due, the deadline for reporting is automatically extended until the first business day on which the system becomes available following the outage. Use of the ECMPS reporting tool to submit a report or notification required under this subpart satisfies any requirement under subpart A of this part to submit that same report or notification (or the information contained in it) to the appropriate EPA Regional office or state agency whose delegation request has been approved.

* * * *

■ 12. Amend § 63.10022 by revising paragraphs (a)(2) and (3) to read as follows:

§ 63.10022 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) * * *

(2) For each existing unit participating in the emissions averaging option that is equipped with PM CPMS, maintain the average parameter value at or below the operating limit established during the most recent performance test.

(3) For each existing unit participating in the emissions averaging option

venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in table 4 to this subpart that applies.

* * * *

§ 63.10023 [Amended]

■ 13. Amend § 63.10023 by removing the introductory text to the section.

■ 14. Amend § 63.10030 by revising paragraph (e)(3) to read as follows:

§ 63.10030 What notifications must I submit and when?

* * * *

(e) * * *

(3) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing; fuel moisture analyses; performance testing with operating limits (e.g., use of PM CPMS); CEMS; or a sorbent trap monitoring system.

* * * *

■ 15. Amend § 63.10031 by revising paragraph (a)(4), paragraph (a)(5) introductory text, paragraphs (f)(2) and (4), paragraph (f)(6) introductory text, and paragraphs (g) through (k) to read as follows:

§ 63.10031 What reports must I submit and when?

(a) * * *

(4) If you elect to demonstrate continuous compliance using a PM CPMS, you must meet the electronic reporting requirements of appendix D to this subpart. Electronic reporting of the hourly PM CPMS output shall begin with the later of the first operating hour on or after January 1, 2024; or the first operating hour after completion of the initial performance stack test that establishes the operating limit for the PM CPMS.

(5) If you elect to monitor SO₂ emission rate continuously as a

surrogate for HCl, you must use the ECMPS reporting tool to submit the following information to EPA (except where it is already required to be reported or has been previously provided under the Acid Rain Program or another emissions reduction program that requires the use of part 75 of this chapter):

* * * *

(f) * * *

(2) If, for a particular EGU or a group of EGUs serving a common stack, you have elected to demonstrate compliance using a PM CEMS, an approved HAP metals CMS, or a PM CPMS, you must submit quarterly PDF reports in accordance with paragraph (f)(6) of this section, which include all of the 30-boiler operating day rolling average emission rates derived from the CEMS data or the 30-boiler operating day rolling average responses derived from the PM CPMS data (as applicable). The quarterly reports are due within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st. Submission of these quarterly reports in PDF files shall end with the report that covers the fourth calendar quarter of 2023. Beginning with the first calendar quarter of 2024, the compliance averages shall no longer be reported separately, but shall be incorporated into the quarterly compliance reports described in paragraph (g) of this section. In addition to the compliance averages for PM CEMS, PM CPMS, and/or HAP metals CMS, the quarterly compliance reports described in paragraph (g) of this section must also include the 30- (or, if applicable 90-) boiler operating day rolling average emission rates for Hg, HCl, HF, and/or SO₂, if you have elected to (or are required to) continuously monitor these pollutants. Further, if your EGU or common stack is in an averaging plan, your quarterly compliance reports must identify all of the EGUs or common stacks in the plan

and must include all of the 30- (or 90-) group boiler operating day rolling weighted average emission rates (WAERs) for the averaging group.

* * * * *

(4) You must submit semiannual compliance reports as required under paragraphs (b) through (d) of this section, ending with a report covering the semiannual period from July 1 through December 31, 2023, and Notifications of Compliance Status as required under § 63.10030(e), as PDF files. Quarterly compliance reports shall be submitted in a format specified by the Administrator, thereafter, in accordance with paragraph (g) of this section, starting with a report covering the first calendar quarter of 2024.

* * * * *

(6) All reports and notifications described in paragraphs (f) introductory text, (f)(1), (2), and (4) of this section shall be submitted to the EPA in the specified format and at the specified frequency, using the ECMPS reporting tool. Each PDF version of a stack test report, CEMS RATA report, PM CEMS correlation test report, RRA report, and RCA report must include sufficient information to assess compliance and to demonstrate that the reference method testing was done properly. Note that EPA will continue to accept, as necessary, PDF reports that are being phased out at the end of 2023, if the submission deadlines for those reports extend beyond December 31, 2023. The following data elements must be entered into the ECMPS reporting tool at the time of submission of each PDF file:

* * * * *

(g) Starting with a report for the first calendar quarter of 2024, you must use the ECMPS reporting tool to submit quarterly electronic compliance reports. Each quarterly compliance report shall include the applicable data elements in sections 2 through 13 of appendix E to this subpart. For each stack test summarized in the compliance report, you must also submit the applicable reference method information in sections 17 through 31 of appendix E to this subpart. The compliance reports and associated appendix E information must be submitted no later than 60 days after the end of each calendar quarter.

(h) On and after January 1, 2024, initial Notifications of Compliance Status (if any) shall be submitted in accordance with 40 CFR 63.9(h)(2)(ii), as PDF files, using the ECMPS reporting tool. The applicable data elements in paragraphs (f)(6)(i) through (xii) of this

section must be entered into the ECMPS reporting tool with each Notification.

(i) If you have elected to use paragraph (2) of the definition of “startup” in § 63.10042 (only allowed before January 2, 2025), then, for startup and shutdown incidents that occur on or prior to December 31, 2023, you must include the information in § 63.10031(c)(5) in the semiannual compliance report, in a PDF file. If you have elected to use paragraph (2) of the definition of “startup” in § 63.10042, then, for startup and shutdown event(s) that occur on or after January 1, 2024, you must use the ECMPS reporting tool to submit the information in §§ 63.10031(c)(5) and 63.10020(e) along with each quarterly compliance report, in a PDF file, starting with a report for the first calendar quarter of 2024. The applicable data elements in paragraphs (f)(6)(i) through (xii) of this section must be entered into the ECMPS reporting tool with each startup and shutdown report.

(j) If you elect to use a certified PM CEMS to monitor PM emissions continuously to demonstrate compliance with this subpart and have begun recording valid data from the PM CEMS prior to November 9, 2020, you must use the ECMPS reporting tool to submit a detailed report of your PS 11 correlation test (see appendix B to part 60 of this chapter) in a PDF file no later than 60 days after that date. For a correlation test completed on or after November 9, 2020, but prior to January 1, 2024, you must submit the PDF report no later than 60 days after the date on which the test is completed. For a correlation test completed on or after January 1, 2024, you must submit the PDF report according to section 7.2.4 of appendix C to this subpart. The applicable data elements in paragraphs (f)(6)(i) through (xii) of this section must be entered into the ECMPS reporting tool with the PDF report.

(k) If you elect to demonstrate compliance using a PM CPMS or an approved HAP metals CMS, you must submit quarterly reports of your QA/QC activities (e.g., calibration checks, performance audits), in a PDF file, beginning with a report for the first quarter of 2024, if the PM CPMS or HAP metals CMS is used for the compliance demonstration in that quarter. Otherwise, submit a report for the first calendar quarter in which the PM CPMS or HAP metals CMS is used to demonstrate compliance. These reports are due no later than 60 days after the end of each calendar quarter. The applicable data elements in paragraphs

(f)(6)(i) through (xii) of this section must be entered into the ECMPS reporting tool with the PDF report.

■ 16. Amend § 63.10032 by revising paragraph (a) introductory text to read as follows:

§ 63.10032 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section. If you are required to (or elect to) continuously monitor Hg and/or HCl and/or HF and/or PM emissions, or if you elect to use a PM CPMS, you must keep the records required under appendix A and/or appendix B and/or appendix C and/or appendix D to this subpart. If you elect to conduct periodic (e.g., quarterly or annual) performance stack tests, then, for each test completed on or after January 1, 2024, you must keep records of the applicable data elements under 40 CFR 63.7(g). You must also keep records of all data elements and other information in appendix E to this subpart that apply to your compliance strategy.

* * * * *

■ 17. Amend § 63.10042 by adding the definition “Stationary combustion turbine” in alphabetical order to read as follows:

§ 63.10042 What definitions apply to this subpart?

* * * * *

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric generating system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. Stationary combustion turbines do not include turbines located at a research or laboratory facility, if research is conducted on the turbine itself and the turbine is not being used to power other applications at the research or laboratory facility.

* * * * *

■ 18. Revise tables 1, 2, 4, 5, 6, 7, and 8 to subpart UUUUU of part 63 to read as follows:

TABLE 1 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED EGUS

[As stated in § 63.9991, you must comply with the following applicable emission limits]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
1. Coal-fired unit not low rank virgin coal.	a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se) b. Hydrogen chloride (HCl)	9.0E–2 lb/MWh ¹ OR 6.0E–2 lb/GWh OR 8.0E–3 lb/GWh. 3.0E–3 lb/GWh. 6.0E–4 lb/GWh. 4.0E–4 lb/GWh. 7.0E–3 lb/GWh. 2.0E–3 lb/GWh. 2.0E–2 lb/GWh. 4.0E–3 lb/GWh. 4.0E–2 lb/GWh. 5.0E–2 lb/GWh. 1.0E–2 lb/MWh	Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run. Collect a minimum of 4 dscm per run. Collect a minimum of 3 dscm per run. For Method 26A at appendix A–8 to part 60 of this chapter, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320 at appendix A to part 63 of this chapter, sample for a minimum of 1 hour.
2. Coal-fired units low rank virgin coal.	c. Sulfur dioxide (SO ₂) ³ a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se) b. Hydrogen chloride (HCl)	1.0 lb/MWh 3.0E–3 lb/GWh 9.0E–2 lb/MWh ¹ OR 6.0E–2 lb/GWh OR 8.0E–3 lb/GWh. 3.0E–3 lb/GWh. 6.0E–4 lb/GWh. 4.0E–4 lb/GWh. 7.0E–3 lb/GWh. 2.0E–3 lb/GWh. 2.0E–2 lb/GWh. 4.0E–3 lb/GWh. 4.0E–2 lb/GWh. 5.0E–2 lb/GWh. 1.0E–2 lb/MWh	SO ₂ CEMS. Hg CEMS or sorbent trap monitoring system only. Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run. Collect a minimum of 4 dscm per run. Collect a minimum of 3 dscm per run. For Method 26A, collect a minimum of 3 dscm per run For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.
3. IGCC unit	c. Sulfur dioxide (SO ₂) ³ a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se)	1.0 lb/MWh 4.0E–2 lb/GWh 7.0E–2 lb/MWh ⁴ 9.0E–2 lb/MWh ⁵ . OR 4.0E–1 lb/GWh OR 2.0E–2 lb/GWh. 2.0E–2 lb/GWh. 1.0E–3 lb/GWh. 2.0E–3 lb/GWh. 4.0E–2 lb/GWh. 4.0E–3 lb/GWh. 9.0E–3 lb/GWh. 2.0E–2 lb/GWh. 7.0E–2 lb/GWh. 3.0E–1 lb/GWh.	SO ₂ CEMS. Hg CEMS or sorbent trap monitoring system only. Collect a minimum catch of 3.0 milligrams or a minimum sample volume of 2 dscm per run. Collect a minimum of 1 dscm per run. Collect a minimum of 2 dscm per run.

TABLE 1 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits]

If your EGU is in this subcategory . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
4. Liquid oil-fired unit—continental (excluding limited-use liquid oil-fired subcategory units).	b. Hydrogen chloride (HCl)	2.0E–3 lb/MWh	For Method 26A, collect a minimum of 1 dscm per run; for Method 26 at appendix A–8 to part 60 of this chapter, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.
	OR		
	Sulfur dioxide (SO ₂) ³	4.0E–1 lb/MWh	SO ₂ CEMS.
	c. Mercury (Hg)	3.0E–3 lb/GWh	Hg CEMS or sorbent trap monitoring system only.
	a. Filterable particulate matter (PM).	3.0E–1 lb/MWh ¹	Collect a minimum of 1 dscm per run.
	OR		
	Total HAP metals	2.0E–4 lb/MWh	Collect a minimum of 2 dscm per run.
	OR		
	Individual HAP metals:		Collect a minimum of 2 dscm per run.
	Antimony (Sb)	1.0E–2 lb/GWh.	
5. Liquid oil-fired unit—non-continental (excluding limited-use liquid oil-fired subcategory units).	Arsenic (As)	3.0E–3 lb/GWh.	
	Beryllium (Be)	5.0E–4 lb/GWh.	
	Cadmium (Cd)	2.0E–4 lb/GWh.	
	Chromium (Cr)	2.0E–2 lb/GWh.	
	Cobalt (Co)	3.0E–2 lb/GWh.	
	Lead (Pb)	8.0E–3 lb/GWh.	
	Manganese (Mn)	2.0E–2 lb/GWh.	
	Nickel (Ni)	9.0E–2 lb/GWh.	
	Selenium (Se)	2.0E–2 lb/GWh.	
	Mercury (Hg)	1.0E–4 lb/GWh	For Method 30B at appendix A–8 to part 60 of this chapter sample volume determination (Section 8.2.4), the estimated Hg concentration should nominally be <1/2 the standard.
	b. Hydrogen chloride (HCl)	4.0E–4 lb/MWh	For Method 26A, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.
	c. Hydrogen fluoride (HF) ..	4.0E–4 lb/MWh	For Method 26A, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.
	a. Filterable particulate matter (PM).	2.0E–1 lb/MWh ¹	Collect a minimum of 1 dscm per run.
	OR		
	Total HAP metals	7.0E–3 lb/MWh	Collect a minimum of 1 dscm per run.
	OR		
	Individual HAP metals:		Collect a minimum of 3 dscm per run.
	Antimony (Sb)	8.0E–3 lb/GWh.	
	Arsenic (As)	6.0E–2 lb/GWh.	
	Beryllium (Be)	2.0E–3 lb/GWh.	
	Cadmium (Cd)	2.0E–3 lb/GWh.	
	Chromium (Cr)	2.0E–2 lb/GWh.	
	Cobalt (Co)	3.0E–1 lb/GWh.	
	Lead (Pb)	3.0E–2 lb/GWh.	
	Manganese (Mn)	1.0E–1 lb/GWh.	
	Nickel (Ni)	4.1E0 lb/GWh.	
	Selenium (Se)	2.0E–2 lb/GWh.	
	Mercury (Hg)	4.0E–4 lb/GWh	For Method 30B sample volume determination (Section 8.2.4), the estimated Hg concentration should nominally be <1/2 the standard.
	b. Hydrogen chloride (HCl)	2.0E–3 lb/MWh	For Method 26A, collect a minimum of 1 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.
	c. Hydrogen fluoride (HF) ..	5.0E–4 lb/MWh	For Method 26A, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour.

TABLE 1 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
6. Solid oil-derived fuel-fired unit.	a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se) b. Hydrogen chloride (HCl) OR Sulfur dioxide (SO ₂) ³ c. Mercury (Hg)	3.0E–2 lb/MWh ¹ OR 6.0E–1 lb/GWh OR 8.0E–3 lb/GWh. 3.0E–3 lb/GWh. 6.0E–4 lb/GWh. 7.0E–4 lb/GWh. 6.0E–3 lb/GWh. 2.0E–3 lb/GWh. 2.0E–2 lb/GWh. 7.0E–3 lb/GWh. 4.0E–2 lb/GWh. 6.0E–3 lb/GWh. 4.0E–4 lb/MWh 1.0 lb/MWh 2.0E–3 lb/GWh	Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run. Collect a minimum of 1 dscm per run. Collect a minimum of 3 dscm per run. For Method 26A, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ² or Method 320, sample for a minimum of 1 hour. SO ₂ CEMS. Hg CEMS or Sorbent trap monitoring system only.

¹ Gross output.² Incorporated by reference, see § 63.14.³ You may not use the alternate SO₂ limit if your EGU does not have some form of FGD system (or, in the case of IGCC EGUs, some other acid gas removal system either upstream or downstream of the combined cycle block) and SO₂ CEMS installed.⁴ Duct burners on syngas; gross output.⁵ Duct burners on natural gas; gross output.

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
1. Coal-fired unit not low rank virgin coal.	a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn)	3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh ² . OR 5.0E–5 lb/MMBtu or 5.0E–1 lb/GWh. OR 8.0E–1 lb/TBtu or 8.0E–3 lb/GWh. 1.1E0 lb/TBtu or 2.0E–2 lb/GWh. 2.0E–1 lb/TBtu or 2.0E–3 lb/GWh. 3.0E–1 lb/TBtu or 3.0E–3 lb/GWh. 2.8E0 lb/TBtu or 3.0E–2 lb/GWh. 8.0E–1 lb/TBtu or 8.0E–3 lb/GWh. 1.2E0 lb/TBtu or 2.0E–2 lb/GWh. 4.0E0 lb/TBtu or 5.0E–2 lb/GWh.	Before July 6, 2027: Collect a minimum of 1 dscm per run. On or after July 6, 2027: Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run. Collect a minimum of 1 dscm per run. Collect a minimum of 3 dscm per run.

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
2. Coal-fired unit low rank virgin coal.	Nickel (Ni)	3.5E0 lb/TBtu or 4.0E–2 lb/GWh.	For Method 26A at appendix A–8 to part 60 of this chapter, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320 at appendix A to part 63 of this chapter, sample for a minimum of 1 hour.
	Selenium (Se)	5.0E0 lb/TBtu or 6.0E–2 lb/GWh.	
	b. Hydrogen chloride (HCl)	2.0E–3 lb/MMBtu or 2.0E–2 lb/MWh.	SO ₂ CEMS.
	OR		
	Sulfur dioxide (SO ₂) ⁴	2.0E–1 lb/MMBtu or 1.5E0 lb/MWh.	LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B at appendix A–8 to part 60 of this chapter run or Hg CEMS or sorbent trap monitoring system only.
	c. Mercury (Hg)	1.2E0 lb/TBtu or 1.3E–2 lb/GWh.	
	OR		LEE Testing for 90 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only.
	a. Filterable particulate matter (PM).	3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh ² .	
	OR		Before July 6, 2027: Collect a minimum of 1 dscm per run. On or after July 6, 2027: Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance demonstration. For all other compliance demonstration options, collect a minimum of 1 dscm per run.
	Total non-Hg HAP metals	5.0E–5 lb/MMBtu or 5.0E–1 lb/GWh.	
	OR		Collect a minimum of 3 dscm per run.
	Individual HAP metals:		
	Antimony (Sb)	8.0E–1 lb/TBtu or 8.0E–3 lb/GWh.	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26 at appendix A–8 to part 60 of this chapter, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 1 hour.
	Arsenic (As)	1.1E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Beryllium (Be)	2.0E–1 lb/TBtu or 2.0E–3 lb/GWh.	
	Cadmium (Cd)	3.0E–1 lb/TBtu or 3.0E–3 lb/GWh.	
	Chromium (Cr)	2.8E0 lb/TBtu or 3.0E–2 lb/GWh.	
	Cobalt (Co)	8.0E–1 lb/TBtu or 8.0E–3 lb/GWh.	
	Lead (Pb)	1.2E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Manganese (Mn)	4.0E0 lb/TBtu or 5.0E–2 lb/GWh.	
	Nickel (Ni)	3.5E0 lb/TBtu or 4.0E–2 lb/GWh.	
	Selenium (Se)	5.0E0 lb/TBtu or 6.0E–2 lb/GWh.	
	b. Hydrogen chloride (HCl)	2.0E–3 lb/MMBtu or 2.0E–2 lb/MWh.	SO ₂ CEMS.
	OR		
	Sulfur dioxide (SO ₂) ⁴	2.0E–1 lb/MMBtu or 1.5E0 lb/MWh.	LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only.
	c. Mercury (Hg)	4.0E0 lb/TBtu or 4.0E–2 lb/GWh.	

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
3. IGCC unit	a. Filterable particulate matter (PM). OR Total non-Hg HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se) b. Hydrogen chloride (HCl) c. Mercury (Hg)	4.0E–2 lb/MMBtu or 4.0E–1 lb/MWh². OR 6.0E–5 lb/MMBtu or 5.0E–1 lb/GWh. OR 1.4E0 lb/TBtu or 2.0E–2 lb/GWh. 1.5E0 lb/TBtu or 2.0E–2 lb/GWh. 1.0E–1 lb/TBtu or 1.0E–3 lb/GWh. 1.5E–1 lb/TBtu or 2.0E–3 lb/GWh. 2.9E0 lb/TBtu or 3.0E–2 lb/GWh. 1.2E0 lb/TBtu or 2.0E–2 lb/GWh. 1.9E+2 lb/TBtu or 1.8E0 lb/GWh. 2.5E0 lb/TBtu or 3.0E–2 lb/GWh. 6.5E0 lb/TBtu or 7.0E–2 lb/GWh. 2.2E+1 lb/TBtu or 3.0E–1 lb/GWh. 5.0E–4 lb/MMBtu or 5.0E–3 lb/MWh. 2.5E0 lb/TBtu or 3.0E–2 lb/GWh. 3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh². OR 8.0E–4 lb/MMBtu or 8.0E–3 lb/MWh. OR 1.3E+1 lb/TBtu or 2.0E–1 lb/GWh. 2.8E0 lb/TBtu or 3.0E–2 lb/GWh. 2.0E–1 lb/TBtu or 2.0E–3 lb/GWh. 3.0E–1 lb/TBtu or 2.0E–3 lb/GWh. 5.5E0 lb/TBtu or 6.0E–2 lb/GWh. 2.1E+1 lb/TBtu or 3.0E–1 lb/GWh. 8.1E0 lb/TBtu or 8.0E–2 lb/GWh. 2.2E+1 lb/TBtu or 3.0E–1 lb/GWh. 1.1E+2 lb/TBtu or 1.1E0 lb/GWh. 3.3E0 lb/TBtu or 4.0E–2 lb/GWh.	Before July 6, 2027: Collect a minimum of 1 dscm per run. On or after July 6, 2027: Collect a minimum catch of 3.0 milligrams or a minimum sample volume of 2 dscm per run. Collect a minimum of 1 dscm per run. Collect a minimum of 2 dscm per run. For Method 26A, collect a minimum of 1 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010)³ or Method 320, sample for a minimum of 1 hour. LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only. Collect a minimum of 1 dscm per run. Collect a minimum of 1 dscm per run. Collect a minimum of 1 dscm per run.
4. Liquid oil-fired unit—continental (excluding limited-use liquid oil-fired sub-category units).	a. Filterable particulate matter (PM). OR Total HAP metals OR Individual HAP metals: Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Lead (Pb) Manganese (Mn) Nickel (Ni) Selenium (Se)	3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh². OR 8.0E–4 lb/MMBtu or 8.0E–3 lb/MWh. OR 1.3E+1 lb/TBtu or 2.0E–1 lb/GWh. 2.8E0 lb/TBtu or 3.0E–2 lb/GWh. 2.0E–1 lb/TBtu or 2.0E–3 lb/GWh. 3.0E–1 lb/TBtu or 2.0E–3 lb/GWh. 5.5E0 lb/TBtu or 6.0E–2 lb/GWh. 2.1E+1 lb/TBtu or 3.0E–1 lb/GWh. 8.1E0 lb/TBtu or 8.0E–2 lb/GWh. 2.2E+1 lb/TBtu or 3.0E–1 lb/GWh. 1.1E+2 lb/TBtu or 1.1E0 lb/GWh. 3.3E0 lb/TBtu or 4.0E–2 lb/GWh.	Collect a minimum of 1 dscm per run. Collect a minimum of 1 dscm per run.

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this subcategory . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
5. Liquid oil-fired unit—non-continental (excluding limited-use liquid oil-fired subcategory units).	Mercury (Hg)	2.0E–1 lb/TBtu or 2.0E–3 lb/GWh.	For Method 30B sample volume determination (Section 8.2.4), the estimated Hg concentration should nominally be <1/2 the standard.
	b. Hydrogen chloride (HCl)	2.0E–3 lb/MMBtu or 1.0E–2 lb/MWh.	For Method 26A, collect a minimum of 1 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 1 hour.
	c. Hydrogen fluoride (HF) ..	4.0E–4 lb/MMBtu or 4.0E–3 lb/MWh.	For Method 26A, collect a minimum of 1 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 1 hour.
	a. Filterable particulate matter (PM).	3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh ² .	Collect a minimum of 1 dscm per run.
	OR	OR	
	Total HAP metals	6.0E–4 lb/MMBtu or 7.0E–3 lb/MWh.	Collect a minimum of 1 dscm per run.
	OR	OR	
	Individual HAP metals:		Collect a minimum of 2 dscm per run.
	Antimony (Sb)	2.2E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Arsenic (As)	4.3E0 lb/TBtu or 8.0E–2 lb/GWh.	
	Beryllium (Be)	6.0E–1 lb/TBtu or 3.0E–3 lb/GWh.	
	Cadmium (Cd)	3.0E–1 lb/TBtu or 3.0E–3 lb/GWh.	
	Chromium (Cr)	3.1E+1 lb/TBtu or 3.0E–1 lb/GWh.	
	Cobalt (Co)	1.1E+2 lb/TBtu or 1.4E0 lb/GWh.	
	Lead (Pb)	4.9E0 lb/TBtu or 8.0E–2 lb/GWh.	
	Manganese (Mn)	2.0E+1 lb/TBtu or 3.0E–1 lb/GWh.	
	Nickel (Ni)	4.7E+2 lb/TBtu or 4.1E0 lb/GWh.	
	Selenium (Se)	9.8E0 lb/TBtu or 2.0E–1 lb/GWh.	
	Mercury (Hg)	4.0E–2 lb/TBtu or 4.0E–4 lb/GWh.	For Method 30B sample volume determination (Section 8.2.4), the estimated Hg concentration should nominally be <1/2 the standard.
	b. Hydrogen chloride (HCl) ..	2.0E–4 lb/MMBtu or 2.0E–3 lb/MWh.	For Method 26A, collect a minimum of 1 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 2 hours.
	c. Hydrogen fluoride (HF) ..	6.0E–5 lb/MMBtu or 5.0E–4 lb/MWh.	For Method 26A, collect a minimum of 3 dscm per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 2 hours.
6. Solid oil-derived fuel-fired unit.	a. Filterable particulate matter (PM).	8.0E–3 lb/MMBtu or 9.0E–2 lb/MWh ² .	Before July 6, 2027: Collect a minimum of 1 dscm per run. On or after July 6, 2027: Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run.
	OR	OR	
	Total non-Hg HAP metals	4.0E–5 lb/MMBtu or 6.0E–1 lb/GWh.	Collect a minimum of 1 dscm per run.
	OR	OR	
	Individual HAP metals:		Collect a minimum of 3 dscm per run.
	Antimony (Sb)	8.0E–1 lb/TBtu or 7.0E–3 lb/GWh.	
	Arsenic (As)	3.0E–1 lb/TBtu or 5.0E–3 lb/GWh.	
	Beryllium (Be)	6.0E–2 lb/TBtu or 5.0E–4 lb/GWh.	

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this subcategory . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
7. Eastern Bituminous Coal Refuse (EBCR)-fired unit.	Cadmium (Cd)	3.0E–1 lb/TBtu or 4.0E–3 lb/GWh.	
	Chromium (Cr)	8.0E–1 lb/TBtu or 2.0E–2 lb/GWh.	
	Cobalt (Co)	1.1E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Lead (Pb)	8.0E–1 lb/TBtu or 2.0E–2 lb/GWh.	
	Manganese (Mn)	2.3E0 lb/TBtu or 4.0E–2 lb/GWh.	
	Nickel (Ni)	9.0E0 lb/TBtu or 2.0E–1 lb/GWh.	
	Selenium (Se)	1.2E0 lb/Tbtu or 2.0E–2 lb/GWh.	
	b. Hydrogen chloride (HCl)	5.0E–3 lb/MMBtu or 8.0E–2 lb/MWh.	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320, sample for a minimum of 1 hour.
	OR		
	Sulfur dioxide (SO ₂) ⁴	3.0E–1 lb/MMBtu or 2.0E0 lb/MWh.	SO ₂ CEMS.
	c. Mercury (Hg)	2.0E–1 lb/TBtu or 2.0E–3 lb/GWh.	LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only.
	a. Filterable particulate matter (PM).	3.0E–2 lb/MMBtu or 3.0E–1 lb/MWh ² .	Before July 6, 2027: Collect a minimum of 1 dscm per run. On or after July 6, 2027: Collect a minimum catch of 6.0 milligrams or a minimum sample volume of 4 dscm per run if using PM CEMS for compliance. For all other compliance demonstration options, collect a minimum of 1 dscm per run.
	OR	OR	
	Total non-Hg HAP metals	5.0E–5 lb/MMBtu or 5.0E–1 lb/GWh.	Collect a minimum of 1 dscm per run.
	OR	OR	
	Individual HAP metals:		Collect a minimum of 3 dscm per run.
	Antimony (Sb)	8.0E–1 lb/TBtu or 8.0E–3 lb/GWh.	
	Arsenic (As)	1.1E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Beryllium (Be)	2.0E–1 lb/TBtu or 2.0E–3 lb/GWh.	
	Cadmium (Cd)	3.0E–1 lb/TBtu or 3.0E–3 lb/GWh.	
	Chromium (Cr)	2.8E0 lb/TBtu or 3.0E–2 lb/GWh.	
	Cobalt (Co)	8.0E–1 lb/TBtu or 8.0E–3 lb/GWh.	
	Lead (Pb)	1.2E0 lb/TBtu or 2.0E–2 lb/GWh.	
	Manganese (Mn)	4.0E0 lb/TBtu or 5.0E–2 lb/GWh.	
	Nickel (Ni)	3.5E0 lb/TBtu or 4.0E–2 lb/GWh.	
	Selenium (Se)	5.0E0 lb/TBtu or 6.0E–2 lb/GWh.	
	b. Hydrogen chloride (HCl)	4.0E–2 lb/MMBtu or 4.0E–1 lb/MWh.	For Method 26A at appendix A–8 to part 60 of this chapter, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run. For ASTM D6348–03 (Reapproved 2010) ³ or Method 320 at appendix A to part 63 of this chapter, sample for a minimum of 1 hour.
	OR		
	Sulfur dioxide (SO ₂) ⁴	6E–1 lb/MMBtu or 9E0 lb/MWh.	SO ₂ CEMS.

TABLE 2 TO SUBPART UUUUU OF PART 63—EMISSION LIMITS FOR EXISTING EGUS—Continued

[As stated in § 63.9991, you must comply with the following applicable emission limits¹]

If your EGU is in this sub-category . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in table 5 to this subpart . . .
	c. Mercury (Hg)	1.2E0 lb/TBtu or 1.3E–2 lb/GWh. OR 1.0E0 lb/TBtu or 1.1E–2 lb/GWh.	LEE Testing for 30 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B at appendix A–8 to part 60 of this chapter run or Hg CEMS or sorbent trap monitoring system only. LEE Testing for 90 days with a sampling period consistent with that given in section 5.2.1 of appendix A to this subpart per Method 30B run or Hg CEMS or sorbent trap monitoring system only.

¹ For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume must be increased nominally by a factor of 2.

² Gross output.

³ Incorporated by reference, see § 63.14.

⁴ You may not use the alternate SO₂ limit if your EGU does not have some form of FGD system and SO₂ CEMS installed.

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TABLE 4 TO SUBPART UUUUU OF PART 63—OPERATING LIMITS FOR EGUS

[As stated in § 63.9991, you must comply with the applicable operating limits]

If you demonstrate compliance using . . .	You must meet these operating limits . . .
PM CPMS	Maintain the 30-boiler operating day rolling average PM CPMS output determined in accordance with the requirements of § 63.10023(b)(2) and obtained during the most recent performance test run demonstrating compliance with the filterable PM, total non-mercury HAP metals (total HAP metals, for liquid oil-fired units), or individual non-mercury HAP metals (individual HAP metals including Hg, for liquid oil-fired units) emissions limitation(s).

TABLE 5 TO SUBPART UUUUU OF PART 63—PERFORMANCE TESTING REQUIREMENTS

[As stated in § 63.10007, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources¹]

To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using . . . ²
1. Filterable Particulate matter (PM).	Emissions Testing	a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the filterable PM concentration. f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.	Method 1 at appendix A–1 to part 60 of this chapter. Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter. Method 3A or 3B at appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981. ³ Method 4 at appendix A–3 to part 60 of this chapter. Methods 5 or 5I at appendix A–3 to part 60 of this chapter. For positive pressure fabric filters, Method 5D at appendix A–3 to part 60 of this chapter for filterable PM emissions. Note that the Method 5 or 5I front half temperature shall be 160° ± 14 °C (320° ± 25 °F). Method 19 F-factor methodology at appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).
	OR	OR	
	PM CEMS	a. Install, certify, operate, and maintain the PM CEMS.	Performance Specification 11 at appendix B to part 60 of this chapter and Procedure 2 at appendix F to part 60 of this chapter.

TABLE 5 TO SUBPART UUUUU OF PART 63—PERFORMANCE TESTING REQUIREMENTS—Continued

[As stated in § 63.10007, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources ¹]

To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using . . . ²
2. Total or individual non-Hg HAP metals.	Emissions Testing	b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates. a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the HAP metals emissions concentrations and determine each individual HAP metals emissions concentration, as well as the total filterable HAP metals emissions concentration and total HAP metals emissions concentration. f. Convert emissions concentrations (individual HAP metals, total filterable HAP metals, and total HAP metals) to lb/MMBtu or lb/MWh emissions rates.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d). Method 19 F-factor methodology at appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)). Method 1 at appendix A-1 to part 60 of this chapter. Method 2, 2A, 2C, 2F, 2G or 2H at appendix A-1 or A-2 to part 60 of this chapter. Method 3A or 3B at appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.³ Method 4 at appendix A-3 to part 60 of this chapter. Method 29 at appendix A-8 to part 60 of this chapter. For liquid oil-fired units, Hg is included in HAP metals and you may use Method 29, Method 30B at appendix A-8 to part 60 of this chapter; for Method 29, you must report the front half and back half results separately. When using Method 29, report metals matrix spike and recovery levels. Method 19 F-factor methodology at appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).
3. Hydrogen chloride (HCl) and hydrogen fluoride (HF).	Emissions Testing	a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the HCl and HF emissions concentrations.	Method 1 at appendix A-1 to part 60 of this chapter. Method 2, 2A, 2C, 2F, 2G or 2H at appendix A-1 or A-2 to part 60 of this chapter. Method 3A or 3B at appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.³ Method 4 at appendix A-3 to part 60 of this chapter. Method 26 or Method 26A at appendix A-8 to part 60 of this chapter or Method 320 at appendix A to part 63 of this chapter or ASTM D6348-03³ with (1) the following conditions when using ASTM D6348-03: (A) The test plan preparation and implementation in the Annexes to ASTM D6348-03, Sections A1 through A8 are mandatory; (B) For ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (see Equation A5.5); (C) For the ASTM D6348-03 test data to be acceptable for a target analyte, %R must be 70% ≥ R ≤ 130%; and

TABLE 5 TO SUBPART UUUUU OF PART 63—PERFORMANCE TESTING REQUIREMENTS—Continued

[As stated in § 63.10007, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources ¹]

To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using . . . ²
4. Mercury (Hg)	OR	OR	(D) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation: Reported Result = (Measured Concentration in Stack)/(%R)x.
	HCl and/or HF CEMS	f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.	(2) Spiking levels nominally no greater than two times the level corresponding to the applicable emission limit. Method 26A must be used if there are entrained water droplets in the exhaust stream. Method 19 F-factor methodology at appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).
	Emissions Testing	a. Install, certify, operate, and maintain the HCl or HF CEMS. b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	Appendix B of this subpart. Part 75 of this chapter and § 63.10010(a), (b), (c), and (d). Method 19 F-factor methodology at appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).
	OR	a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the Hg emission concentration. f. Convert emissions concentration to lb/TBtu or lb/GWh emission rates.	Method 1 at appendix A–1 to part 60 of this chapter or Method 30B at Appendix A–8 for Method 30B point selection. Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter. Method 3A or 3B at appendix A–1 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981. ³ Method 4 at appendix A–3 to part 60 of this chapter. Method 30B at appendix A–8 to part 60 of this chapter, ASTM D6784 ³ or Method 29 at appendix A–8 to part 60 of this chapter; for Method 29, you must report the front half and back half results separately. Method 19 F-factor methodology at appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).
	Hg CEMS	OR	Sections 3.2.1 and 5.1 of appendix A of this subpart. Part 75 of this chapter and § 63.10010(a), (b), (c), and (d). Section 6 of appendix A to this subpart.
	OR	OR	
	Sorbent trap monitoring system.	a. Install, certify, operate, and maintain the sorbent trap monitoring system.	Sections 3.2.2 and 5.2 of appendix A to this subpart.

TABLE 5 TO SUBPART UUUUU OF PART 63—PERFORMANCE TESTING REQUIREMENTS—Continued

[As stated in § 63.10007, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources ¹]

To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using . . . ²
	OR LEE testing	b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates. OR a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the Hg emission concentration. f. Convert emissions concentrations from the LEE test to lb/TBtu or lb/GWh emissions rates. g. Convert average lb/TBtu or lb/GWh Hg emission rate to lb/year, if you are attempting to meet the 29.0 lb/year threshold.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d). Section 6 of appendix A to this subpart. Single point located at the 10% centroidal area of the duct at a port location per Method 1 at appendix A-1 to part 60 of this chapter or Method 30B at Appendix A-8 for Method 30B point selection. Method 2, 2A, 2C, 2F, 2G, or 2H at appendix A-1 or A-2 to part 60 of this chapter or flow monitoring system certified per appendix A of this subpart. Method 3A or 3B at appendix A-1 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981, ³ or diluent gas monitoring systems certified according to part 75 of this chapter. Method 4 at appendix A-3 to part 60 of this chapter, or moisture monitoring systems certified according to part 75 of this chapter. Method 30B at appendix A-8 to part 60 of this chapter; perform a 30 operating day test, with a maximum of 10 operating days per run (<i>i.e.</i> , per pair of sorbent traps) or sorbent trap monitoring system or Hg CEMS certified per appendix A of this subpart. Method 19 F-factor methodology at appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)). Potential maximum annual heat input in TBtu or potential maximum electricity generated in GWh.
5. Sulfur dioxide (SO ₂)	SO ₂ CEMS	a. Install, certify, operate, and maintain the CEMS. b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert hourly emissions concentrations to 30-boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	Part 75 of this chapter and § 63.10010(a) and (f). Part 75 of this chapter and § 63.10010(a), (b), (c), and (d). Method 19 F-factor methodology at appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and gross output data (see § 63.10007(e)).

¹ Regarding emissions data collected during periods of startup or shutdown, see §§ 63.10020(b) and (c) and 63.10021(h).

² See tables 1 and 2 to this subpart for required sample volumes and/or sampling run times.

³ Incorporated by reference, see § 63.14.

TABLE 6 TO SUBPART UUUUU OF PART 63—ESTABLISHING PM CPMS OPERATING LIMITS

[As stated in § 63.10007, you must comply with the following requirements for establishing operating limits]

If you have an applicable emission limit for . . .	And you choose to establish PM CPMS operating limits, you must . . .	And . . .	Using . . .	According to the following procedures . . .
Filterable Particulate matter (PM), total non-mercury HAP metals, individual non-mercury HAP metals, total HAP metals, or individual HAP metals for an EGU.	Install, certify, maintain, and operate a PM CPMS for monitoring emissions discharged to the atmosphere according to § 63.10010(h)(1).	Establish a site-specific operating limit in units of PM CPMS output signal (e.g., milliamps, mg/acm, or other raw signal).	Data from the PM CPMS and the PM or HAP metals performance tests.	1. Collect PM CPMS output data during the entire period of the performance tests. 2. Record the average hourly PM CPMS output for each test run in the performance test. 3. Determine the PM CPMS operating limit in accordance with the requirements of § 63.10023(b)(2) from data obtained during the performance test demonstrating compliance with the filterable PM or HAP metals emissions limitations.

TABLE 7 TO SUBPART UUUUU OF PART 63—DEMONSTRATING CONTINUOUS COMPLIANCE

[As stated in § 63.10021, you must show continuous compliance with the emission limitations for affected sources according to the following]

If you use one of the following to meet applicable emissions limits, operating limits, or work practice standards . . .	You demonstrate continuous compliance by . . .
1. CEMS to measure filterable PM, SO₂, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg. 2. PM CPMS to measure compliance with a parametric operating limit 3. Site-specific monitoring using CMS for liquid oil-fired EGUs for HCl and HF emission limit monitoring. 4. Quarterly performance testing for coal-fired, solid oil derived fired, or liquid oil-fired EGUs to measure compliance with one or more non-PM (or its alternative emission limits) applicable emissions limit in table 1 or 2, or PM (or its alternative emission limits) applicable emissions limit in table 2. 5. Conducting periodic performance tune-ups of your EGU(s) 6. Work practice standards for coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGUs during startup. 7. Work practice standards for coal-fired, liquid oil-fired, or solid oil-derived fuel-fired EGUs during shutdown.	Calculating the 30- (or 90-) boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS or sorbent trap data for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown. Calculating the 30- (or 90-) boiler operating day rolling arithmetic average of all of the quality assured hourly average PM CPMS output data (e.g., milliamps, PM concentration, raw data signal) collected for all operating hours for the previous 30- (or 90-) boiler operating days, excluding data recorded during periods of startup or shutdown. If applicable, by conducting the monitoring in accordance with an approved site-specific monitoring plan. Calculating the results of the testing in units of the applicable emissions standard. Conducting periodic performance tune-ups of your EGU(s), as specified in § 63.10021(e). Operating in accordance with table 3. Operating in accordance with table 3.

TABLE 8 TO SUBPART UUUUU OF PART 63—REPORTING REQUIREMENTS

[In accordance with § 63.10031, you must meet the following reporting requirements, as they apply to your compliance strategy]

You must submit the following reports . . .
1. The electronic reports required under § 63.10031 (a)(1), if you continuously monitor Hg emissions. 2. The electronic reports required under § 63.10031 (a)(2), if you continuously monitor HCl and/or HF emissions. Where applicable, these reports are due no later than 30 days after the end of each calendar quarter. 3. The electronic reports required under § 63.10031(a)(3), if you continuously monitor PM emissions. Reporting of hourly PM emissions data using ECMPs shall begin with the first operating hour after: January 1, 2024, or the hour of completion of the initial PM CEMS correlation test, whichever is later. Where applicable, these reports are due no later than 30 days after the end of each calendar quarter. 4. The electronic reports required under § 63.10031(a)(4), if you elect to use a PM CPMS. Reporting of hourly PM CPMS response data using ECMPs shall begin with the first operating hour after January 1, 2024, or the first operating hour after completion of the initial performance stack test that establishes the operating limit for the PM CPMS, whichever is later.

TABLE 8 TO SUBPART UUUUU OF PART 63—REPORTING REQUIREMENTS—Continued

[In accordance with § 63.10031, you must meet the following reporting requirements, as they apply to your compliance strategy]

You must submit the following reports . . .

- Where applicable, these reports are due no later than 30 days after the end of each calendar quarter.
5. The electronic reports required under § 63.10031(a)(5), if you continuously monitor SO₂ emissions.
- Where applicable, these reports are due no later than 30 days after the end of each calendar quarter.
6. PDF reports for all performance stack tests completed prior to January 1, 2024 (including 30- or 90-boiler operating day Hg LEE test reports and PM test reports to set operating limits for PM CPMS), according to § 63.10031(f) introductory text and (f)(6).
- For each test, submit the PDF report no later than 60 days after the date on which testing is completed.
- For a PM test that is used to set an operating limit for a PM CPMS, the report must also include the information in § 63.10023(b)(2)(vi).
- For each performance stack test completed on or after January 1, 2024, submit the test results in the relevant quarterly compliance report under § 63.10031(g), together with the applicable reference method information in sections 17 through 31 of appendix E to this subpart.
7. PDF reports for all RATAs of Hg, HCl, HF, and/or SO₂ monitoring systems completed prior to January 1, 2024, and for correlation tests, RRAs and/or RCAs of PM CEMS completed prior to January 1, 2024, according to § 63.10031(f)(1) and (6).
- For each test, submit the PDF report no later than 60 days after the date on which testing is completed.
- For each SO₂ or Hg system RATA completed on or after January 1, 2024, submit the electronic test summary required by appendix A to this subpart or part 75 of this chapter (as applicable) together with the applicable reference method information in sections 17 through 30 of appendix E to this subpart, either prior to or concurrent with the relevant quarterly emissions report.
- For each HCl or HF system RATA, and for each correlation test, RRA, and RCA of a PM CEMS completed on or after January 1, 2024, submit the electronic test summary in accordance with section 11.4 of appendix B to this subpart or section 7.2.4 of appendix C to this part, as applicable, together with the applicable reference method information in sections 17 through 30 of appendix E to this subpart.
8. Quarterly reports, in PDF files, that include all 30-boiler operating day rolling averages in the reporting period derived from your PM CEMS, approved HAP metals CMS, and/or PM CPMS, according to § 63.10031(f)(2) and (6). These reports are due no later than 60 days after the end of each calendar quarter.
- The final quarterly rolling averages report in PDF files shall cover the fourth calendar quarter of 2023.
- Starting with the first quarter of 2024, you must report all 30-boiler operating day rolling averages for PM CEMS, approved HAP metals CMS, PM CPMS, Hg CEMS, Hg sorbent trap systems, HCl CEMS, HF CEMS, and/or SO₂ CEMS (or 90-boiler operating day rolling averages for Hg systems), in a format specified by the Administrator, in the quarterly compliance reports required under § 63.10031(g).
- If your EGU or common stack is in an averaging plan, each quarterly compliance report must identify the EGUs in the plan and include all of the 30- or 90-group boiler operating day WAERs for the averaging group.
- The quarterly compliance reports must be submitted no later than 60 days after the end of each calendar quarter.
9. The semiannual compliance reports described in § 63.10031(c) and (d), in PDF files, according to § 63.10031(f)(4) and (6). The due dates for these reports are specified in § 63.10031(b).
- The final semiannual compliance report shall cover the period from July 1, 2023, through December 31, 2023.
10. Notifications of compliance status, in PDF files, according to § 63.10031(f)(4) and (6) until December 31, 2023, and according to § 63.10031(h) thereafter.
11. Quarterly electronic compliance reports, in accordance with § 63.10031(g), starting with a report for the first calendar quarter of 2024. The reports must be in a format specified by the Administrator and must include the applicable data elements in sections 2 through 13 of appendix E to this subpart.
- These reports are due no later than 60 days after the end of each calendar quarter.
12. Quarterly reports, in PDF files, that include the applicable information in §§ 63.10031(c)(5)(ii) and 63.10020(e) pertaining to startup and shutdown events, starting with a report for the first calendar quarter of 2024, if you have elected to use paragraph 2 of the definition of startup in § 63.10042 (see § 63.10031(i)). On or after January 2, 2025, you may not use paragraph 2 of the definition of startup in § 63.10042.
- These PDF reports shall be submitted no later than 60 days after the end of each calendar quarter, along with the quarterly compliance reports required under § 63.10031(g).
13. A test report for the PS 11 correlation test of your PM CEMS, in accordance with § 63.10031(j).
- If, prior to November 9, 2020, you have begun using a certified PM CEMS to demonstrate compliance with this subpart, use the ECMPS reporting tool to submit the report, in a PDF file, no later than 60 days after that date.
- For correlation tests completed on or after November 9, 2020, but prior to January 1, 2024, submit the report, in a PDF file, no later than 60 days after the date on which the test is completed.
- For correlation tests completed on or after January 1, 2024, submit the test results electronically, according to section 7.2.4 of appendix C to this subpart, together with the applicable reference method data in sections 17 through 31 of appendix E to this subpart.
14. Quarterly reports that include the QA/QC activities for your PM CPMS or approved HAP metals CMS (as applicable), in PDF files, according to § 63.10031(k).
- The first report shall cover the first calendar quarter of 2024, if the PM CPMS or HAP metals CMS is in use during that quarter. Otherwise, reporting begins with the first calendar quarter in which the PM CPMS or HAP metals CMS is used to demonstrate compliance.
- These reports are due no later than 60 days after the end of each calendar quarter.

* * * * *

■ 19. Amend appendix A to subpart UUUUU of part 63 by revising sections 7.1.1.2.1, 7.2.3.3, 7.2.4, and 7.2.5.1 to read as follows:

Appendix A to Subpart UUUUU of Part 63—Hg Monitoring Provisions

* * * * *

7. Recordkeeping and Reporting

* * * * *

7.1.1.2.1 *Electronic.* The electronic monitoring plan records must include the following: unit or stack ID number(s); monitoring location(s); the Hg monitoring methodologies used; emissions controls; Hg monitoring system information, including, but not limited to: Unique system and component ID numbers; the make, model, and serial number of the monitoring equipment; the sample acquisition method; formulas used to

calculate Hg emissions; and Hg monitor span and range information. The electronic monitoring plan shall be evaluated and submitted using the ECMPS reporting tool provided by the EPA.

* * * * *

7.2.3.3 All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS reporting tool. Hard copy portions of the monitoring plan shall be

kept on record according to section 7.1 of this appendix.

7.2.4 Certification, Recertification, and Quality-Assurance Test Reporting. Except for daily QA tests of the required monitoring systems (*i.e.*, calibration error tests and flow monitor interference checks), the results of all required certification, recertification, and quality-assurance tests described in paragraphs 7.1.9.1 through 7.1.9.7 of this section (except for test results previously submitted, *e.g.*, under the ARP) shall be submitted electronically, using the ECMPS reporting tool, either prior to or concurrent with the relevant quarterly electronic emissions report.

* * * * *

7.2.5.1 Beginning with the report for the calendar quarter in which the initial compliance demonstration is completed or the calendar quarter containing the applicable date in § 63.9984, the owner or operator of any affected unit shall use the ECMPS reporting tool to submit electronic quarterly reports to the Administrator, in a format specified by the Administrator, for each affected unit (or group of units monitored at a common stack) under this subpart.

* * * * *

■ 20. Amend appendix B to subpart UUUUU of part 63 by revising sections 10.1.1.2, 11.3.3, 11.4, and 11.5.1 to read as follows:

Appendix B to Subpart UUUUU of Part 63—HCl and HF Monitoring Provisions

* * * * *

10. Recordkeeping Requirements

* * * * *

10.1.1.2 Contents of the Monitoring Plan. For HCl and/or HF CEMS, the monitoring plan shall contain the applicable electronic and hard copy information in sections 10.1.1.2.1 and 10.1.1.2.2 of this appendix. For stack gas flow rate, diluent gas, and moisture monitoring systems, the monitoring plan shall include the electronic and hard copy information required for those systems under § 75.53(g) of this chapter. The electronic monitoring plan shall be evaluated using the ECMPS reporting tool.

* * * * *

11. Reporting Requirements

* * * * *

11.3.3 All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS reporting tool. Hard copy portions of the monitoring plan shall be kept on record according to section 10.1 of this appendix.

11.4 Certification, Recertification, and Quality-Assurance Test Reporting Requirements. Except for daily QA tests (*i.e.*, calibrations and flow monitor interference checks), which are included in each electronic quarterly emissions report, use the ECMPS reporting tool to submit the results of all required certification, recertification, quality-assurance, and diagnostic tests of the monitoring systems required under this appendix electronically. Submit the test results either prior to or concurrent with the relevant quarterly electronic emissions report. However, for RATAs of the HCl monitor, if this is not possible, you have up to 60 days after the test completion date to submit the test results; in this case, you may claim provisional status for the emissions data affected by the test, starting from the date and hour in which the test was completed and continuing until the date and hour in which the test results are submitted. If the test is successful, the status of the data in that time period changes from provisional to quality-assured, and no further action is required. However, if the test is unsuccessful, the provisional data must be invalidated and resubmission of the affected emission report(s) is required.

* * * * *

11.5.1 The owner or operator of any affected unit shall use the ECMPS reporting tool to submit electronic quarterly reports to the Administrator in a format specified by the Administrator, for each affected unit (or group of units monitored at a common stack). If the certified HCl or HF CEMS is used for the initial compliance demonstration, HCl or HF emissions reporting shall begin with the first operating hour of the 30-boiler operating day compliance demonstration period. Otherwise, HCl or HF emissions reporting shall begin with the first operating hour after successfully completing all required certification tests of the CEMS.

* * * * *

■ 21. Amend appendix C to subpart UUUUU of part 63 by:

■ a. Revising sections 1.2, 1.3, and 4.1;

■ b. Removing and reserving sections 4.1.1.1 and 4.2.3; and

■ c. Revising sections 5.1.4, 7.1.1.2.1, 7.2.3.3, 7.2.4, and 7.2.5.1.

The revisions read as follows:

Appendix C to Subpart UUUUU of Part 63—PM Monitoring Provisions

1. General Provisions

* * * * *

1.2 Initial Certification and Recertification Procedures. You, as the owner or operator of an affected EGU that uses a PM CEMS to demonstrate

compliance with a filterable PM emissions limit in table 1 or 2 to this subpart must certify and, if applicable, recertify the CEMS according to Performance Specification 11 (PS-11) in appendix B to part 60 of this chapter.

1.3 Quality Assurance and Quality Control Requirements. You must meet the applicable quality assurance requirements of Procedure 2 in appendix F to part 60 of this chapter.

* * * * *

4. Certification and Recertification Requirements

4.1 Certification Requirements. You must certify your PM CEMS and the other CMS used to determine compliance with the applicable emissions standard before the PM CEMS can be used to provide data under this subpart. Redundant backup monitoring systems (if used) are subject to the same certification requirements as the primary systems.

* * * * *

5. Ongoing Quality Assurance (QA) and Data Validation

* * * * *

5.1.4 RCA and RRA Acceptability. The results of your RRA or RCA are considered acceptable provided that the criteria in section 10.4(5) of Procedure 2 in appendix F to part 60 of this chapter are met for an RCA or section 10.4(6) of Procedure 2 in appendix F to part 60 of this chapter are met for an RRA.

* * * * *

7. Recordkeeping and Reporting

* * * * *

7.1.1.2.1 Electronic. Your electronic monitoring plan records must include the following information: Unit or stack ID number(s); unit information (type of unit, maximum rated heat input, fuel type(s), emission controls); monitoring location(s); the monitoring methodologies used; monitoring system information, including (as applicable): Unique system and component ID numbers; the make, model, and serial number of the monitoring equipment; the sample acquisition method; formulas used to calculate emissions; operating range and load information; monitor span and range information; units of measure of your PM concentrations (see section 3.2.2 of this appendix); and appropriate default values. Your electronic monitoring plan shall be evaluated and submitted using the ECMPS reporting tool provided by the EPA.

* * * * *

7.2.3.3 All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS reporting tool. Hard copy portions of the monitoring plan shall be submitted to the appropriate delegated authority.

7.2.4 Certification, Recertification, and Quality-Assurance Test Reporting. Except for daily quality assurance tests of the required monitoring systems (*i.e.*, calibration error or drift tests, sample volume checks, system optics checks, and flow monitor interference checks), you must submit the results of all required certification, recertification, and quality-assurance tests described in sections 7.1.9.1 through 7.1.9.6 and 7.1.10 of this appendix electronically (except for test results previously submitted, *e.g.*, under the Acid Rain Program), using the ECMPS reporting tool. Submit the results of the quality assurance test (*i.e.*, RCA or RRA) or, if applicable, a new PM CEMS correlation test, either prior to or concurrent with the relevant quarterly electronic emissions report. If this is not possible, you have up to 60 days after the test completion date to submit the test results; in this case, you may claim provisional status for the emissions data affected by the quality assurance test or correlation, starting from the date and hour in which the test was completed and continuing until the date and hour in which the test results are submitted. For an RRA or RCA, if the applicable audit specifications are met, the status of the emissions data in the relevant time period changes from provisional to quality-assured, and no further action is required. For a successful correlation test, apply the correlation equation retrospectively to the raw data to change the provisional status of the data to quality-assured, and resubmit the affected emissions report(s). However, if the applicable performance specifications are not met, the provisional data must be invalidated, and resubmission of the affected quarterly emission report(s) is required. For a failed RRA or RCA, you must take corrective actions and proceed according to the applicable requirements found in sections 10.5 through 10.7 of Procedure 2 until a successful quality assurance test report is submitted. If a correlation test is unsuccessful, you may not report quality-assured data from the PM CEMS until the results of a subsequent correlation test show that the specifications in section 13.0 of PS 11 are met.

* * * * *

7.2.5.1 For each affected EGU (or group of EGUs monitored at a common stack), the owner or operator must use the ECMPS reporting tool to submit electronic quarterly emissions reports to the Administrator, in a format specified by the Administrator, starting with a report for the later of:

* * * * *

■ 22. Amend appendix D to subpart UUUUU of part 63 by:

■ a. Removing the introductory text to the appendix; and

■ b. Revising sections 3.1.1.2, 3.2.3.3, 3.2.4.1, 3.2.5, and 3.2.5.1.

The revisions read as follows:

Appendix D to Subpart UUUUU of Part 63—PM CPMS Monitoring Provisions

* * * * *

3. Recordkeeping and Reporting

* * * * *

3.1.1.2 In addition to the site-specific monitoring plan required under § 63.10000(d), you must use the ECMPS reporting tool to prepare and maintain an electronic monitoring plan for your PM CPMS.

* * * * *

3.2.3.3 All electronic monitoring plan submittals and updates shall be made to the Administrator using the ECMPS reporting tool.

* * * * *

3.2.4.1 For each affected EGU (or group of EGUs monitored at a common stack) that is subject to the provisions of this appendix, reporting of hourly responses from the PM CPMS will begin either with the first operating hour in the third quarter of 2023 or the first operating hour after completion of the initial stack test that establishes the operating limit, whichever is later. The owner or operator must then use the ECMPS reporting tool to submit electronic quarterly reports to the Administrator, in a format specified by the Administrator, starting with a report for the later of:

* * * * *

3.2.5 Performance Stack Test Results. You must use the ECMPS reporting tool to report the results of all performance stack tests conducted to document compliance with the applicable emissions limit in table 1 or 2 to this subpart, as follows:

3.2.5.1 Report a summary of each test electronically, in a format specified by the Administrator, in the relevant quarterly compliance report under § 63.10031(g); and

* * * * *

■ 23. Amend appendix E to subpart UUUUU of part 63 by revising sections

1.0, 15.2, 16.0 through 16.4, 17.0, 19.0, 20.0, and 31.0 to read as follows:

Appendix E to Subpart UUUUU of Part 63—Data Elements

1.0 You must record the electronic data elements in this appendix that apply to your compliance strategy under this subpart. The applicable data elements in sections 2 through 13 of this appendix must be reported in the quarterly compliance reports required under § 63.10031(g), in a format specified by the Administrator, starting with a report that covers the first quarter of 2024. For stack tests used to demonstrate compliance, RATAs, PM CEMS correlations, RRAs and RCAs that are completed on and after January 1, 2024, the applicable data elements in sections 17 through 30 of this appendix must be reported in an XML format prescribed by the Administrator, and the information in section 31 of this appendix must be reported in as one or more PDF files.

* * * * *

15.2 For each RATA, PM CEMS correlation, RRA, or RCA, when you use the ECMPS reporting tool to report the test results as required under appendix A, B, or C to this subpart or, for SO₂ RATAs under part 75 of this chapter, you must submit along with the test results, the data elements in sections 17 and 18 of this appendix and, for each test run, the data elements in sections 19 through 30 of this appendix that are associated with the reference method(s) used.

* * * * *

16.0 *Applicable Reference Methods.* One or more of the following EPA reference methods is needed for the tests described in sections 14.1 through 14.3 of this appendix: Method 1, 2, 3A, 4, 5, 5D, 5I, 6C, 26, 26A, 29, and/or 30B.

16.1 Application of EPA test Methods 1 and 2. If you use periodic stack testing to comply with an *output-based* emissions limit, you must determine the stack gas flow rate during each performance test run in which EPA test Method 5, 5D, 5I, 26, 26A, 29, or 30B is used, in order to convert the measured pollutant concentration to units of the standard. For EPA test Methods 5, 5D, 5I, 26A and 29, which require isokinetic sampling, the delta-P readings made with the pitot tube and manometer at the EPA test Method 1 traverse points, taken together with measurements of stack gas temperature, pressure, diluent gas concentration (from a separate EPA test Method 3A or 3B test) and moisture, provide the necessary data for the EPA test Method 2 flow rate calculations. Note that even

if you elect to comply with a *heat input-based* standard, when EPA test Method 5, 5D, 5I, 26A, or 29 is used, you must still use EPA test Method 2 to determine the average stack gas velocity (v_s), which is needed for the percent isokinetic calculation. The EPA test Methods 26 and 30B do not require isokinetic sampling; therefore, when either of these methods is used, if the stack gas flow rate is needed to comply with the applicable *output-based* emissions limit, you must make a separate EPA test Method 2 determination during each test run.

16.2 Application of EPA test Method 3A. If you elect to perform periodic stack testing to comply with a *heat input-based* emissions limit, a separate measurement of the diluent gas (CO_2 or O_2) concentration is required for each test run in which EPA test Method 5, 5D, 5I, 26, 26A, 29, or 30B is used, in order to convert the measured pollutant concentration to units of the standard. The EPA test Method 3A is the preferred CO_2 or O_2 test method, although EPA test Method 3B may be used instead. Diluent gas measurements are also needed for stack gas molecular weight determinations when using EPA test Method 2.

16.3 Application of EPA test Method 4. For performance stack tests, depending on which equation is used to convert pollutant concentration to units of the standard, measurement of the stack gas moisture content, using EPA test Method 4, may also be required for each test run. The EPA test Method 4 moisture data are also needed for the EPA test Method 2 calculations (to determine the molecular weight of the gas) and for the RATA of an Hg CEMS that measures on a wet basis, when EPA test Method 30B is used. Other applications that require EPA test Method 4 moisture determinations include: RATAs of an SO_2 monitor, when the reference method and CEMS data are measured on a different moisture basis (wet or dry); conversion of wet-basis pollutant concentrations to the units of a *heat input-based* emissions limit when certain EPA test Method 19 equations are used (e.g., Eq. 19–3, 19–4, or 19–8); and stack gas molecular weight determinations. When EPA test Method 5, 5D, 5I, 26A, or 29 is used for the performance test, the EPA test Method 4 moisture determination may be made by using the water collected in the impingers together with data from the dry gas meter; alternatively, a separate EPA test Method 4 determination may be made. However, when EPA test Method 26 or 30B is used, EPA test Method 4 must be performed separately.

16.4 Applications of EPA test Methods 5, 5D, and 5I. The EPA test Method 5 (or, if applicable, 5D or 5I) must be used for the following applications: To demonstrate compliance with a filterable PM emissions limit; for PM tests used to set operating limits for PM CPMS; and for the initial correlations, RRAs and RCAs of a PM CEMS.

17.0 Facility and Test Company Information. In accordance with § 63.7(e)(3), a test is defined as three or more runs of one or more EPA Reference Method(s) conducted to measure the amount of a specific regulated pollutant, pollutants, or surrogates being emitted from a particular EGU (or group of EGUs that share a common stack), and to satisfy requirements of this subpart. On or after January 1, 2024, you must report the data elements in sections 17 and 18, each time that you complete a required performance stack test, RATA, PM CEMS correlation, RRA, or RCA at the affected EGU(s), using EPA test Method 5, 5B, 5D, 5I, 6C, 26, 26A, 29, or 30B. You must also report the applicable data elements in sections 19 through 25 of this appendix for each test. If any separate, corresponding EPA test Method 2, 3A, or 4 test is conducted in order to convert a pollutant concentration to the units of the applicable emission standard given in table 1 or table 2 of this subpart or to convert pollutant concentration from wet to dry basis (or vice-versa), you must also report the applicable data elements in sections 26 through 31 of this appendix.

The applicable data elements in sections 17 through 31 of this appendix must be submitted separately, in XML format, along with the quarterly Compliance Report (for stack tests) or along with the electronic test results submitted to the ECMPS reporting tool (for CMS performance evaluations). The Electronic Reporting Tool (ERT) or an equivalent schema can be utilized to create this XML file. Note: Ideally, for all of the tests completed at a given facility in a particular calendar quarter, the applicable data elements in sections 17 through 31 of this appendix should be submitted together in one XML file. However, as shown in table 8 to this subpart, the timelines for submitting stack test results and CMS performance evaluations are not identical. Therefore, for calendar quarters in which both types of tests are completed, it may not be possible to submit the applicable data elements for all of those tests in a single XML file; separate submittals may

be necessary to meet the applicable reporting deadlines.

* * * * *

19.0 Run-Level and Lab Data Elements for EPA test Methods 5, 5B, 5D, 5I, 26A, and 29. You must report the appropriate Source ID (i.e., Data Element 18.1) and the following data elements, as applicable, for each run of each performance stack test, PM CEMS correlation test, RATA, RRA, or RCA conducted using isokinetic EPA test Method 5, 5B, 5D, 5I, or 26A. If your EGU is oil-fired and you use EPA test Method 26A to conduct stack tests for both HCl and HF, you must report these data elements separately for each pollutant. When you use EPA test Method 29 to measure the individual HAP metals, total filterable HAP metals and total HAP metals, report only the run-level data elements (sections 19.1, 19.3 through 19.30, and 19.38 through 19.41 of this appendix), and the point-level and lab data elements in sections 20 and 21 of this appendix:

* * * * *

20.0 Point-Level Data Elements for EPA test Methods 5, 5B, 5D, 5I, 26A, & 29. To link the point-level data with the run data in the xml schema, you must report the Source ID (i.e., Data Element 18.1), EPA Test Method (Data Element 19.3), Run Number (Data Element 19.4), and Run Begin Date (Data Element 19.8) with the following point-level data elements for each run of each performance stack test, PM CEMS correlation test, RATA, RRA, or RCA conducted using isokinetic EPA test Method 5, 5B, 5D, 5I, 26A, or 29. Note that these data elements are required for all EPA test Method 29 applications, whether the method is being used to measure the total or individual HAP metals concentrations:

* * * * *

31.0 Other Information for Each Test or Test Series. You must provide each test included in the data file described in this appendix with supporting documentation, in a PDF file submitted concurrently with the file, such that all the data required to be reported by § 63.7(g) are provided. That supporting data include but are not limited to diagrams showing the location of the test site and the sampling points, laboratory report(s) including analytical calibrations, calibrations of source sampling equipment, calibration gas cylinder certificates, raw instrumental data, field data sheets, quality assurance data (e.g., field recovery spikes) and any required audit results and stack testers' credentials (if applicable). The applicable data elements in § 63.10031(f)(6)(i) through (xii) must be

entered into the ECMPS reporting tool with each PDF submittal; the test number(s) (see § 63.10031(f)(6)(xi)) must	be included. The test number(s) must match the test number(s) in sections 19	through 31 of this appendix (as applicable). [FR Doc. 2026-03638 Filed 2-23-26; 8:45 am] BILLING CODE 6560-50-P
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§ 52.120 Identification of plan

(e) * * *

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TABLE 1—EPA-APPROVED NON-REGULATORY AND QUASI-REGULATORY MEASURES

[Excluding certain resolutions and statutes, which are listed in Tables 2 and 3, respectively]¹

Name of SIP provision	Applicable geographic or nonattainment area or title/subject	State submittal date	EPA approval date	Explanation
*	*	*	*	*
The State of Arizona Air Pollution Control Implementation Plan Clean Air Act Section 110(a)(2) State Implementation Plan Elements (Excluding Part D Elements and Plans)				
State Implementation Plan Revision: Clean Air Act Section 110(a)(2) for the 2012 Fine Particulate & 2015 Ozone NAAQS (dated February 2022).	State-wide	February 10, 2022	4/16/2026, 91 FR [IN-SERT FEDERAL REGISTER PAGE WHERE THE DOCUMENT BEGINS].	Adopted by the Arizona Department of Environmental Quality on February 10, 2022. As of 4/16/2026 EPA has approved all elements of the submittal addressing requirements for the 2012 PM _{2.5} NAAQS.
*	*	*	*	*

¹ Table 1 is divided into three parts: Clean Air Act Section 110(a)(2) State Implementation Plan Elements (excluding Part D Elements and Plans), Part D Elements and Plans (other than for the Metropolitan Phoenix or Tucson Areas), and Part D Elements and Plans for the Metropolitan Phoenix and Tucson Areas.

* * * * *

[FR Doc. 2026–07400 Filed 4–15–26; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2018–0794; FRL–6716.4–03–OAR]

RIN 2060–AW68

National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units: Final Repeal; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is correcting a final rule that published in the **Federal Register** (FR) on February 24, 2026, and will become effective on April 27, 2026. The EPA finalized the repeal of specific amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-Fired Electric Utility Steam Generating Units (EGUs), commonly referred to as the Mercury and Air Toxics Standards (MATS), that were promulgated on May 7, 2024 (“MATS NESHAP”). This action corrects inadvertent typographical

errors and minor omitted text in the **Federal Register**. The corrections described in this action do not affect the substantive requirements of the final rule that repeal specific amendments to the MATS NESHAP, promulgated on May 7, 2024.

DATES: The correction is effective April 27, 2026.

FOR FURTHER INFORMATION CONTACT: For information about this final action, contact U.S. EPA, Attn: Christopher Werner, Mail Drop: Industrial Processing and Power Division (D243–01), 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–5133; and email address: werner.christopher@epa.gov.

SUPPLEMENTARY INFORMATION: The EPA is correcting the final rule, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units: Final Repeal, which published in the **Federal Register** at 91 FR 9088, February 24, 2026. Following publication of this document, the EPA discovered inadvertent typographical errors and omitted text in the regulatory text of the MATS NESHAP.

The EPA is correcting the following errors published in **Federal Register** Document Number (FR Doc.) 2026–03638, which do not change the requirements finalized in the MATS NESHAP rule that published on February 24, 2026:

- At 91 FR 9127, fourth column of *Table 5 to Subpart UUUUU of Part 63—Performance Testing Requirements*, the final MATS NESHAP rule amendatory instruction number 18 amended table 5 to subpart UUUUU. The regulatory text in entry 3.e.1(D) is missing part of the Reported Result equation. The EPA corrects this equation to read as:

“Reported Result = (Measured Concentration in Stack)/(%R)x100.”

- At 91 FR 9133, third column, *Appendix E to Subpart UUUUU of Part 63—Data Elements*, the final MATS NESHAP rule amendatory instruction number 23 amended section 31.0 of appendix E to subpart UUUUU. The EPA now amends the regulatory text of section 31.0 for clarity, adding the word “data” in front of the third instance of the word “file” in the first sentence in section 31.0 to read: “You must provide each test included in the data file described in this appendix with supporting documentation, in a PDF file submitted concurrently with the data file, such that all the data required to be reported by § 63.7(g) are provided.”

Section 553 of the Administrative Procedure Act provides that when an agency for good cause finds that notice and public procedure are impracticable, unnecessary, or contrary to the public interest, the Agency may issue a rule without providing notice and opportunity for public comment.¹ The

¹ 5 U.S.C. 553(b)(B).

EPA has determined that there is good cause for making this rule final without prior proposal and opportunity for comment because the changes to the rule are minor technical corrections, are noncontroversial in nature, and do not substantively change the requirements of the MATS NESHAP final rule. Rather, the changes correct inadvertent typographical errors and minor omitted text. Additionally, the corrections to the regulatory text match the revisions described in the preamble to the final MATS NESHAP rule. Thus, notice and opportunity for public comment are unnecessary. The EPA finds that this constitutes good cause under 5 U.S.C. 553(b)(B).

Corrections

In FR Doc. 2026–03638 appearing at 91 FR 9088 in the **Federal Register** of Tuesday, February 24, 2026, the following corrections are made:

Table 5 to Subpart UUUU of Part 63—Performance Testing Requirements [Corrected]

1. On page 9127, in the fourth column, the text “(D) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation: Reported Result = (Measured Concentration in Stack)/(%R)x.” is corrected to read “(D) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation: Reported Result = (Measured Concentration in Stack)/(%R)x100.”

Appendix E to Subpart UUUU of Part 63—Data Elements [Corrected]

2. On page 9133, in the third column, first sentence of section “31.0 Other Information for Each Test or Test Series”, the text “You must provide each test included in the data file described in this appendix with supporting documentation, in a PDF file submitted concurrently with the file, such that all the data required to be reported by § 63.7(g) are provided.” is corrected to read “You must provide each test included in the data file described in this appendix with supporting documentation, in a PDF file submitted concurrently with the data file, such that all the data required to be reported by § 63.7(g) are provided.”

Dated: April 13, 2026.

Aaron Szabo,

Assistant Administrator, Office of Air and Radiation.

[FR Doc. 2026–07396 Filed 4–15–26; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 81

[EPA–R03–OAR–2025–1777; FRL–12985–02–R3]

Air Plan Approval; Pennsylvania; Redesignation Request for the Allegheny County Area for the 2012 Annual Fine Particulate Matter Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the Commonwealth of Pennsylvania’s request to redesignate the Allegheny County, Pennsylvania nonattainment area (Allegheny County Area) to attainment for the 2012 annual fine particulate matter (PM_{2.5}) national ambient air quality standards (NAAQS or standard). The redesignation request was submitted by the Commonwealth of Pennsylvania Department of Environmental Protection (PADEP or Pennsylvania) on behalf of the Allegheny County Health Department (ACHD). This action is being taken under the CAA.

DATES: This final rule is effective on May 18, 2026.

ADDRESSES: The EPA has established a docket for this action under Docket ID Number EPA–R03–OAR–2025–1777. All documents in the docket are listed on the www.regulations.gov website. 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 www.regulations.gov, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Ian Neiswinter, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection

Agency, Region III, 1600 John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814–2011. Mr. Neiswinter can also be reached via electronic mail at neiswinter.ian@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document, wherever “we,” “us,” or “our” are used, it is intended to refer to the EPA.

I. Background

Fine particulate pollution can be emitted directly from a source (primary PM_{2.5}) or formed secondarily through chemical reactions in the atmosphere involving precursor pollutants emitted from a variety of sources. The main precursors of secondary PM_{2.5} are sulfur dioxide (SO₂), nitrogen oxides (NO_x), ammonia (NH₃), and volatile organic compounds (VOCs).¹ Sulfates are a type of secondary particulate formed from SO₂ emissions from power plants and industrial facilities. Nitrates, another common type of secondary particulate, are formed from combustion emissions of NO_x from power plants, mobile sources, and other combustion sources.

On January 15, 2013 (78 FR 3086), the EPA promulgated a revised primary annual PM_{2.5} NAAQS to provide increased protection of public health from fine particle pollution. In that action, the EPA strengthened the primary annual PM_{2.5} standard from 15.0 micrograms per cubic meter (µg/m³) to 12.0 µg/m³, which is attained when the 3-year average of the annual arithmetic mean does not exceed 12.0 µg/m³. On January 15, 2015 (80 FR 2206), the EPA published air quality designations for the 2012 annual PM_{2.5} NAAQS. In that action, the EPA designated all municipalities in Allegheny County, Pennsylvania as one moderate nonattainment area (Allegheny County Area) for the 2012 annual PM_{2.5} NAAQS. See 40 CFR 81.339. On September 4, 2025 PADEP, on behalf of ACHD, formally submitted a redesignation request for the Allegheny County Area for the 2012 annual PM_{2.5} NAAQS.

Section 107(d)(3)(E) of the CAA allows redesignation of an area to attainment of the NAAQS provided that: (1) the Administrator (EPA) determines that the area has attained the applicable NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k) of the CAA; (3) the Administrator determines that the improvement in air quality is due to

¹ See 81 FR 58010 (August 24, 2016).

TABLE 14 TO PARAGRAPH (a)(37)(i)—DELEGATION STATUS FOR PART 63 STANDARDS—STATE OF OKLAHOMA—Continued

[Applies to sources located in certain areas of Indian country]

Subpart	Source category	ODEQ ¹
TTTTTT	Secondary Nonferrous Metals Processing Area Sources	X
UUUUUU	(Reserved)	
VVVVVV	Chemical Manufacturing Area Sources	X
WWWWWW	Area Source Standards for Plating and Polishing Operations	X
XXXXXX	Area Source Standards for Nine Metal Fabrication and Finishing Source Categories	X
YYYYYY	Area Sources: Ferroalloys Production Facilities	X
ZZZZZZ	Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries	X
AAAAAA	Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing	X
BBBBBB	Area Sources: Chemical Preparation Industry	X
CCCCCC	Area Sources: Paints and Allied Products Manufacturing	X
DDDDDD	Prepared Feeds Areas Sources	X
EEEEEE	Gold Mine Ore Processing and Production Area Source Category	X
FFFFFF–GGGGGG	(Reserved)	
HHHHHH	Polyvinyl Chloride and Copolymers Production Major Sources	X
Appendix A	Test Methods	X
Appendix B	Sources Defined by Rarely Reduction Provisions	X
Appendix C	Determination of the Fraction Biodegraded (F _{bio}) in a Biological Treatment Unit	X
Appendix D	Alternative Validation Procedure for EPA Waste and Wastewater Methods	X
Appendix E	Monitoring Procedure for Nonthoroughly Mixed Open Biological Treatment Systems at Kraft Pulp Mills Under Unsafe Sampling Conditions.	X

¹ Authorities which may not be delegated include: § 63.6(g), Approval of Alternative Non-Opacity Emission Standards; § 63.6(h)(9), Approval of Alternative Opacity Standards; § 63.7(e)(2)(ii) and (f), Approval of Major Alternatives to Test Methods; § 63.8(f), Approval of Major Alternatives to Monitoring; § 63.10(f), Approval of Major Alternatives to Recordkeeping and Reporting; and all authorities identified in the subparts (e.g., under “Delegation of Authority”) that cannot be delegated.

² Sections 63.41, 63.43, and 63.44 only of subpart B.

³ The ODEQ has adopted the subpart unchanged and applied for delegation of the standard. The subpart was vacated and remanded to EPA by the United States Court of Appeals for the District of Columbia Circuit. See, *Mossville Environmental Action Network v. EPA*, 370 F. 3d 1232 (D.C. Cir. 2004). Because of the D.C. Court’s holding this subpart is not delegated to ODEQ at this time.

⁴ This subpart was issued a partial vacatur by the United States Court of Appeals for the District of Columbia Circuit. See 72 FR 61060 (October 29, 2007).

⁵ Final rule. See 76 FR 15608 (March 21, 2011), as amended at 78 FR 7138 (January 31, 2013); 80 FR 72807 (November 20, 2015).

⁶ Final promulgated rule adopted by the EPA. See 80 FR 65470 (October 26, 2015). Note that subpart 63 KKKKK was amended to correct minor typographical errors at 80 FR 75817 (December 4, 2015).

⁷ Final Rule. See 77 FR 9304 (February 16, 2012), as amended 81 FR 20172 (April 6, 2016) Final Supplemental Finding that it is appropriate and necessary to regulate HAP emissions from Coal- and Oil-fired EUSGU Units. See 81 FR 24420 (April 25, 2016).

* * * * *

[FR Doc. 2025–24149 Filed 12–31–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2023–0330; FRL–4908.2–01–OAR]

RIN 2060–AW28

Congressional Review Act Revocation of 2024 Review of Final Rule Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA or Agency) is amending the Code of Federal Regulations (CFR) to remove the provisions finalized by the EPA in a 2024 rule titled “Review of Final Rule Reclassification of Major Sources as

Area Sources Under Section 112 of the Clean Air Act” (2024 Rule) and restoring the language of the final rule titled “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act,” published November 19, 2020, and with minor corrections published December 28, 2020. Under the Congressional Review Act (CRA), Congress passed, and the President signed, a joint resolution of disapproval of the 2024 Rule. The 2024 Rule amended the General Provisions that apply to National Emission Standards for Hazardous Air Pollutants (NESHAP) by requiring certain sources of persistent and bioaccumulative hazardous air pollutants (HAP) listed in Clean Air Act (CAA) section 112(c)(6) to continue to comply with major source emission standards under CAA section 112(d)(2) or standards under CAA section 112(d)(4) even if the sources reclassify as area sources. Under the joint resolution and by operation of the CRA, the 2024 Rule has no legal force or effect.

DATES: This final rule is effective January 2, 2026.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2023–0330. All documents in the docket are listed at <https://www.regulations.gov>. Although listed, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The EPA does not place certain other material, such as copyrighted material, on the internet; this material is publicly available only as PDF versions accessible only on EPA computers in the docket office reading room. The public cannot download certain data bases and physical items from the docket but may request these items by contacting the docket office at 202–566–1744. The docket office has 10 business days to respond to such requests. With the exception of such material, publicly available docket materials are available electronically at <https://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact U.S. EPA, Attn: Ms. Angela M. Ortega, Mail Drop: D243–02 109 T.W.

Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-4197; and email address: ortega.angela@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of “we,” “us,” or “our” refers to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

APA Administrative Procedure Act
CAA Clean Air Act
CBI Confidential Business Information
CFR Code of Federal Regulations
CRA Congressional Review Act
EPA Environmental Protection Agency
FR Federal Register
HAP hazardous air pollutant(s)
MACT maximum achievable control technology
NESHAP national emission standards for hazardous air pollutants
NTTAA National Technology Transfer and Advancement Act
OMB Office of Management and Budget
PDF portable document format
PRA Paperwork Reduction Act
RFA Regulatory Flexibility Act
RIA Regulatory Impact Analysis
UMRA Unfunded Mandates Reform Act of 1995
U.S.C. United States Code

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I. Does this action apply to me?

Regulated entities. Categories and entities potentially impacted by this rule include major sources of HAP that were subject to certain major source

NESHAP requirements and that reclassified from a major to an area source of HAP pursuant to the requirements in 40 CFR part 63 subpart A, implementing CAA section 112. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

II. Background and Rationale for This Final Action

On January 25, 2018, the EPA issued a guidance memorandum titled, “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act.”¹ The memorandum discussed the statutory provisions that govern when a major source subject to a major source NESHAP under CAA section 112 may be reclassified as an area source, and thereby avoid being subject to major source NESHAP requirements. The guidance also rescinded the May 1995 “Once In, Always In Policy.”²

On October 1, 2020, the EPA finalized a rule titled “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act” (also known as Major MACT (Maximum Achievable Control Technology) to Area Rule or 2020 Final Rule).³ The 2020 Final Rule allowed major sources of HAP to reclassify as an area source at any time after taking steps to limit emissions.

On September 10, 2024, the EPA finalized a rule titled “Review of Final Rule Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act.”⁴ This 2024 Rule amended the 2020 Final Rule. Specifically, the 2024 Rule amended the NESHAP General Provisions in 40 CFR 63.1(c)(6) to require that sources subject to major source NESHAP used to meet the Agency’s obligations under CAA section 112(c)(6) for seven specific persistent and bioaccumulative HAP remain subject to those major source NESHAP, even if the sources reclassify to area source status. In addition, the 2024 Rule made minor amendments to the notification requirements in 40 CFR 63.9.

The United States Senate passed a joint resolution, S.J. Res. 31, on May 1, 2025, disapproving the 2024 Rule under the CRA, 5 U.S.C. 801 *et seq.* The

United States House of Representatives passed S.J. Res. 31 on May 22, 2025, and President Donald J. Trump signed it into law as Public Law (Pub. L.) 119–20 on June 20, 2025. Under the joint resolution and by operation of the CRA, the 2024 Rule has no legal force or effect.

III. Final Action

This final action revises the CFR by removing the now nullified amendments that had been codified under the 2024 Rule, thus returning the rule to the version finalized in the 2020 Final Rule.

The EPA is taking this ministerial action as a final rule without providing an opportunity for public comment or a public hearing because the EPA finds that the Administrative Procedure Act (APA) “good cause” exemption to notice-and-comment rulemaking applies here.⁵ The EPA has determined that good cause exists to take this final action because the correction of the CFR is a ministerial act to effectuate S.J. Res. 31 and the operation of the CRA. The CRA joint resolution became law on June 20, 2025, at which point the 2024 Rule ceased to have any legal force or effect. As such, public notice and comment is unnecessary and would serve no useful purpose.

For these reasons, the EPA finds good cause to issue a final rulemaking without undergoing public notice and comment, in conformance with 5 U.S.C. 553(b)(B).

IV. Statutory and Executive Order Review

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is considered an Executive Order 14192 deregulatory action. The present value (PV) of the regulatory costs savings beginning in 2025 using a 7 percent discount rate over an infinite time horizon is \$935.8 million in 2024 dollars discounted to 2024. The equivalent annual value (EAV) is \$65.5 million dollars (in 2024 dollars). Details on the estimated cost savings of this final rule can be found

¹ See notice of issuance of this guidance memorandum at 83 FR 5543 (February 8, 2018).

² “Potential to Emit for MACT Standards—Guidance on Timing Issues,” from John Seitz to the EPA Regional Air Division Directors (May 16, 1995) (“May 1995 Seitz Memorandum”).

³ 85 FR 73854, November 19, 2020.

⁴ 89 FR 73293, September 10, 2024.

⁵ 5 U.S.C. 553(b)(B).

in EPA's analysis of the potential costs and benefits associated with this action, which can be found in the docketed memo *Derivation of Regulatory Cost Savings under Executive Order 14912*. To reflect the CRA nullification, this final rule removes from the CFR provisions that keep sources subject to certain major source NESHAP after reclassification to area source status, thus provides regulatory certainty to sources, permitting authorities, and other stakeholders.

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. This final action is ministerial in nature and does not contain any information collection activities.

D. Regulatory Flexibility Act (RFA)

This action is not subject to the RFA. The RFA applies only to rules subject to notice and comment rulemaking requirements under the APA, 5 U.S.C. 553, or any other statute. This rule is not subject to notice and comment requirements because the Agency has invoked the APA "good cause" exemption under 5 U.S.C. 553(b)(B).

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or Tribal governments.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This action is ministerial in nature. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may

disproportionately affect children, per the definition of "covered regulatory action" in section 2–202 of the Executive Order.

Therefore, this action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk. Since this action does not concern human health, the EPA's Policy on Children's Health also does not apply.

I. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under E.O. 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

K. Congressional Review Act (CRA)

As discussed earlier in this document, this action reflects the effect of the joint resolution to disapprove the 2024 Rule under the CRA.

L. Judicial Review

Under CAA section 307(b)(1), any petition for review of this final rule must be filed in the U.S. Court of Appeals for the District of Columbia Circuit by March 3, 2026.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Congressional Review Act, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Lee Zeldin,
Administrator.

Under the authority of the Congressional Review Act and Public Law 119–20, 139 Stat. 71, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart A—General Provisions

§ 63.1 [Amended]

■ 2. Amend § 63.1 by removing paragraph (c)(6)(iii).

■ 3. Amend § 63.9 by revising paragraphs (j) and (k) introductory text, and removing paragraph (k)(3) to read as follows:

§ 63.9 Notification requirements.

* * * * *

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator within 15 calendar days after the change. The owner or operator of a major source that reclassifies to area source status is also subject to the notification requirements of this paragraph (j). The owner or operator may use the application for reclassification with the regulatory authority (e.g., permit application) to fulfill the requirements of this paragraph (j). A source which reclassified after January 25, 2018, and before January 19, 2021, and has not yet provided the notification of a change in information is required to provide such notification no later than February 2, 2021, according to the requirements of paragraph (k) of this section. Beginning January 19, 2021, the owner or operator of a major source that reclassifies to area source status must submit the notification according to the requirements of paragraph (k) of this section. A notification of reclassification must contain the following information:

- (1) The name and address of the owner or operator;
- (2) The address (*i.e.*, physical location) of the affected source;
- (3) An identification of the standard being reclassified from and to (if applicable); and
- (4) Date of effectiveness of the reclassification.

(k) *Electronic submission of notifications or reports.* If you are required to submit notifications or reports following the procedure specified in this paragraph (k), you must submit notifications or reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The notification or report must be submitted by the deadline specified. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI). Anything submitted using CEDRI cannot later be claimed to be CBI. Although we do not expect persons to assert a claim of CBI, if persons wish to assert a CBI, submit a complete notification or report, including information claimed to be CBI, to the EPA. Submit the file on a

compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (k). All CBI claims must be asserted at the time of submission. Furthermore, under section 114(c) of the Act emissions data is not entitled to confidential treatment and requires the EPA to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

* * * * *

[FR Doc. 2025-24202 Filed 12-31-25; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 229

[Docket No. 251229-0188]

RIN 0648-BN37

Taking of Marine Mammals Incidental to Commercial Fishing Operations; Harbor Porpoise Take Reduction Plan; Change to Gillnet Gear Requirements

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Interim final rule; request for comments.

SUMMARY: NMFS is taking a deregulatory action to revise the regulations implementing the Harbor Porpoise Take Reduction Plan (HPTRP) to ensure the HPTRP is consistent with a gillnet gear requirement previously put in place under the Monkfish Fishery Management Plan to reduce bycatch of Atlantic sturgeon. This action is necessary to inform the public about an amendment to the Harbor Porpoise Take Reduction Plan altering the minimum twine size requirement to ensure that fishermen may use the low-profile gillnet gear required by the Monkfish Fishery Management Plan and also be in compliance with the Marine Mammal Protection Act while fishing in the New Jersey Atlantic Sturgeon Bycatch Reduction Area.

DATES: Effective on January 2, 2026. Comments on this revision to the Harbor

Porpoise Take Reduction Plan must be received by February 2, 2026.

ADDRESSES: A plain language summary of this interim final rule is available at <https://www.regulations.gov/docket/NOAA-NMFS-2025-0603>. You may submit comments on this document, identified by NMFS-NOAA-2025-0063, by any of the following methods:

Electronic Submission: Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to <https://www.regulations.gov> and enter NOAA-NMFS-2025-0063 in the Search box. Click on the "Comment" icon, complete the required fields, and enter or attach your comments.

Instructions: All comments received that are timely and properly submitted are a part of the public record and will generally be posted for public viewing on <https://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. We will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous). 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 us.

Copies of this action, including the environmental assessment (EA) prepared in support of this action, as well as the EA and the Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA) for related changes to the Monkfish Fishery Management Plan are available via the internet at <https://www.regulations.gov/> or by contacting Elizabeth Stratton (see **FOR FURTHER INFORMATION CONTACT** below).

Several of the background documents for the Harbor Porpoise Take Reduction Plan (HPTRP) and the take reduction planning process can also be downloaded from the Plan website (<https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/harbor-porpoise-take-reduction-plan>), including copies of the EA for this action. Information on the analytical tools used to support the development and analysis of the interim final regulations can be found in the EA. The complete text of current regulations implementing the HPTRP can be found in 50 CFR 229.33 and 229.34 or downloaded from the HPTRP's website, along with outreach compliance guides to current regulations.

FOR FURTHER INFORMATION CONTACT: Elizabeth Stratton, Harbor Porpoise

Take Reduction Team Coordinator, (978) 281-9307 or nmfs.gar.hprt@noaa.gov.

SUPPLEMENTARY INFORMATION:

Background

Due to high levels of incidental take of harbor porpoise (*Phocoena phocoena*) in U.S. commercial fishing gear in the late 1980s, management of bycatch in commercial gillnet gear of the Gulf of Maine/Bay of Fundy (GOM/BOF) stock of harbor porpoise began with the formation of the Harbor Porpoise Working Group. In 1994, Congress amended the Marine Mammal Protection Act (MMPA) to include provisions governing the take of marine mammals incidental to commercial fishing operations, including incidental take authorization, reporting and monitoring requirements, and development of take reduction planning. Pursuant to section 118(f)(6)(C) of the MMPA, NMFS created the Harbor Porpoise Take Reduction Team (Team) consisting of stakeholders representing state and federal government agencies, the fishing industry, conservation organizations, and researchers. The Team recommended take reduction measures to reduce mortality and serious injury of the GOM/BOF stock of harbor porpoise to below the stock's potential biological removal (PBR) level. NMFS used those recommendations to propose and finalize a take reduction plan. The first iteration of the plan, published on December 2, 1998 (63 FR 66464), was originally conceived as two separate harbor porpoise take reduction plans, one for New England and one for the Mid-Atlantic. These were combined into one plan in a final rule, referred to here as the Harbor Porpoise Take Reduction Plan (HPTRP), but remain in separate sections—50 CFR 229.33 (New England Plan) and 50 CFR 229.34 (Mid-Atlantic Plan)—in the Code of Federal Regulations.

The commercial fisheries managed under the HPTRP, the Northeast sink gillnet fishery and the Mid-Atlantic gillnet fishery, are Category I fisheries as listed on the MMPA List of Fisheries (89 FR 77789, September 24, 2024). Category I fisheries are those that have frequent incidental mortality and serious injury of marine mammals. The HPTRP regulations in New England implemented closures and required pingers for bycatch reduction, while the in the Mid-Atlantic, the HPTRP regulations implemented closures and large-mesh (7–18 inches; 17.78–45.72 cm) and small-mesh (>5 and <7 inches; >12.7 and <17.78 cm) gillnet gear

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2023-0282; FRL-10854-02-OAR]

RIN 2060-AW01

National Emission Standards for Hazardous Air Pollutants: Polyether Polyols Production Industry Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is finalizing amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Polyether Polyols (PEPO) Production source category (“PEPO NESHAP”) under Clean Air Act (CAA) section 112. Specifically, the EPA is finalizing certain ethylene oxide (EtO)-specific standards pursuant to CAA section 112(d)(6) rather than finalizing the proposed second residual risk review and corresponding amendments pursuant to CAA section 112(f)(2). In addition, the EPA is taking final action addressing certain issues raised in an administrative petition for reconsideration. Lastly, the EPA is finalizing maximum achievable control technology (MACT) standards for certain emission points, work practice standards for certain activities where alternatives are appropriate, performance testing requirements once every five years for certain process vents, and electronic reporting requirements for performance test reports, flare management plans, and periodic reports.

DATES: This final rule is effective on March 18, 2026. The Director of the Federal Register (FR) has approved incorporation by reference (IBR) of certain publications listed in the rule as of March 18, 2026.

ADDRESSES: The EPA established a docket for this action under Docket ID No. EPA-HQ-OAR-2023-0282. All documents in the docket are listed in <https://www.regulations.gov/>. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The EPA does not place certain other material, such as copyrighted material, on the internet; this material is publicly available only as portable document format (PDF) versions accessible on EPA computers in the docket office reading room. The public cannot download certain databases and physical items

from the docket but may request these items by contacting the docket office at (202) 566-1744. The docket office has 10 business days to respond to these requests. With the exception of such material, publicly available docket materials are available electronically at <https://www.regulations.gov> or on EPA computers in the docket office reading room at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Time (ET), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact U.S. EPA, Attn: Johanna Klein, Mail Drop: Industrial Processing and Power Division (E143-01), 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2283; and email address: Klein.Johanna@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this notice the use of “we,” “us,” or “our” refers to the EPA. The Agency uses multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ANSI American National Standards Institute
 APCD air pollution control device
 ASME American Society of Mechanical Engineers
 1-BP 1-bromopropane
 CAA Clean Air Act
 CDX Central Data Exchange
 CEDRI Compliance and Emissions Data Reporting Interface
 CEMS continuous emission monitoring system
 CFR Code of Federal Regulations
 CMPU chemical manufacturing process unit
 CO carbon monoxide
 CO₂ carbon dioxide
 EAV equivalent annualized value
 ECO extended cookout
 EIA Economic Impacts Analysis
 EPA Environmental Protection Agency
 ERT Electronic Reporting Tool
 EtO Ethylene Oxide
 Fe Fraction emitted
 kg/yr kilograms per year
 HAP hazardous air pollutant(s)
 HON Hazardous Organic NESHAP
 ICR information collection request
 IFR internal floating roof
 kPa kilopascals
 lb/hr pounds per hour
 lb/yr pounds per year

LDAR leak detection and repair
 LEAN Louisiana Environmental Action Network
 LEL lower explosive limit
 m³ cubic meters
 MACT maximum achievable control technology
 MON Miscellaneous Organic Chemical Manufacturing NESHAP
 MTVP maximum true vapor pressure
 NAICS North American Industry Classification System
 NEI National Emissions Inventory
 NESHAP national emission standards for hazardous air pollutants
 NO_x nitrogen oxides
 NRDC Natural Resources Defense Council
 NTTAA National Technology Transfer and Advancement Act
 OAR Office of Air and Radiation
 OMB Office of Management and Budget
 PDF portable document format
 PEPO polyether polyol(s)
 PMPU polyether polyol manufacturing process unit
 ppmv parts per million by volume
 ppmw parts per million by weight
 PRA Paperwork Reduction Act
 psia pounds per square inch absolute
 psig pounds per square inch gauge
 PRD pressure relief devices
 PV present value
 RFA Regulatory Flexibility Act
 RTR Risk and Technology Review
 scmm standard cubic meters per minute
 SO₂ sulfur dioxide
 THF tetrahydrofuran
 TOC total organic compound
 tpy tons per year
 TRE total resource effectiveness
 µg/m³ micrograms per cubic meter
 UMRA Unfunded Mandates Reform Act
 U.S.C. United States Code
 VCS voluntary consensus standards
 VOC volatile organic compound(s)

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I. General Information

A. Executive Summary

The EPA promulgated the PEPO NESHAP on June 1, 1999, and codified the NESHAP at 40 CFR part 63, subpart PPP.¹ In 2014, the EPA finalized a technology review and residual risk review (“RTR”) for the PEPO NESHAP under the provisions of CAA sections 112(d)(6) and (f)(2);² subsequently, the EPA agreed to reconsider two aspects of the 2014 rulemaking in response to a petition for reconsideration. Through these actions, the Agency addressed its statutory obligations to promulgate MACT standards under CAA section 112(d)(2)–(3), conduct a residual risk review within eight years of promulgating the MACT standards

under CAA section 112(f)(2), and conduct the first technology review (which must occur going forward every eight years) under CAA section 112(d)(6). The Agency concluded in 2014 that further amendments were not required under the RTR but took the opportunity in the 2014 rulemaking to make certain other amendments to the NESHAP.

On December 27, 2024, in connection with a consent decree obligation related to the ongoing technology review requirement in CAA section 112(d)(6), the EPA proposed revisions to the PEPO NESHAP based on the second technology review and reconsideration issues stemming from the 2014 rule. Although the Agency had already completed the residual risk review for this source category in the 2014 RTR, the EPA also proposed a second, “discretionary” residual risk review and certain amendments based on the results of the proposed review.³ Sections II.B.3 and 4 of this preamble describe other revisions that the EPA proposed for the PEPO NESHAP.

In this action, the EPA is finalizing decisions and revisions for the PEPO NESHAP. The EPA summarizes and responds to the more significant public comments on the proposed rule within this preamble.⁴ Following the 81-day comment period, the EPA conducted listening sessions with representatives of PEPO production facilities’ owners and operators through meetings with the American Chemistry Council, American Fuel and Petrochemical Manufacturers, and Huntsman Corporation.⁵ Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA offered government-to-government consultation with Tribes in December 2024.

Specifically, after reviewing public input and considering the issues further, the EPA agrees with public comments that, instead of finalizing a second, “discretionary” residual risk review and EtO-specific standards based on that review, it is more appropriate to evaluate EtO-specific standards under the CAA section 112(d)(6) requirement

to conduct periodic technology reviews and revise standards “as necessary.” The EPA is finalizing the proposed EtO-specific standards (with revisions) for process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater under CAA section 112(d)(6) rather than CAA section 112(f)(2). This pathway satisfies the EPA’s obligations under the statute and the applicable consent decree, provides additional protections for public health, and reflects the typical approach the Agency has taken to revising standards after completion of the RTR. To note, the EPA is not finalizing the proposed fenceline monitoring work practice standard and the proposed revision to the continuous process vent standard. Otherwise, the EPA is finalizing provisions as proposed, with some clarifying changes and technical corrections. A “track changes” version of the regulatory language that incorporates the changes in this action is available in the docket.

B. Does this action apply to me?

Regulated entities. Table 1 of this preamble lists categories and entities potentially regulated by this action.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and source category	NAICS ¹ code
40 CFR part 63, subpart PPP, PEPO Production	325199

¹North American Industry Classification System (NAICS).

Table 1 of this preamble, although not exhaustive, provides a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

C. What is the statutory authority for this final action?

1. NESHAP

The statutory authority for this final action is provided by CAA section 112, as amended (42 U.S.C. 7412). CAA section 112 establishes a two-stage regulatory process to develop standards for emissions of hazardous air pollutant(s) (HAPs) from stationary sources. In the first stage, the EPA

¹ 64 FR 29420 (June 1, 1999).

² 79 FR 17340 (Mar. 27, 2014).

³ 89 FR 105986 (Dec. 27, 2024).

⁴ A summary of all other public comments on the proposal and the EPA’s responses to those comments is available in the document *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, Docket ID No. EPA–HQ–OAR–2023–0282.

⁵ Additional details about these meetings are in the documents titled *Documentation of May 2025 Meetings With Industry Stakeholders*, *Documentation of Meetings With Industry Stakeholders—June through September*, and *Documentation of Meetings With Industry Stakeholders—December 2025 through February 2026*, Docket ID EPA–HQ–OAR–2023–0282.

promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). “Major sources” are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any combination of HAP.⁶ For major sources, these standards are commonly referred to as MACT standards; CAA section 112(d)(2) provides that these must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

CAA section 112(d)(3) establishes a minimum control level for MACT standards, known as the MACT “floor,” based on emission controls achieved in practice by the best performing sources. For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). The EPA also considers control options that are more stringent than the floor and may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.⁷ Standards more stringent than the floor are commonly referred to as “beyond-the-floor” standards.

In the second stage of the regulatory process, the CAA requires the EPA to undertake two different analyses, which the Agency refers to as the technology

review and the residual risk review. Under the technology review, the EPA must review the technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less frequently than every eight years, pursuant to CAA section 112(d)(6). In conducting this review, the EPA is not required to recalculate the MACT floors that were established in earlier rulemakings.⁸ The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).⁹ Pursuant to the D.C. Circuit’s decision in *Louisiana Environmental Action Network (LEAN) v. EPA*,¹⁰ the EPA also reviews available data to determine if there are unregulated emissions of HAP within the source category and evaluate these data for use in developing new emission standards. Under the residual risk review, pursuant to CAA section 112(f), the EPA must within eight years of promulgating the technology-based standards for a source category evaluate the risk to public health remaining after application of the technology-based standards and revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

In the proposal published on December 27, 2024, the EPA conducted a review that included both a technology review, required by CAA section 112(d)(6), and a second residual risk review, which the Agency claimed was allowed but not required under CAA section 112(f)(2).¹¹ Notably, the EPA’s practice prior to 2024 had not involved conducting second, “discretionary” risk reviews or promulgating additional standards based on such a second review when the RTR had already been completed. As discussed below, the EPA is not finalizing the proposed residual risk review in this action and is instead finalizing EtO-specific standards under CAA section 112(d)(6), which authorizes the Agency to revise standards “as necessary.”¹²

⁸ *Ass’n of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013); *Natural Resources Defense Council (NRDC) v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008).

⁹ 42 U.S.C. 7412(d)(2), (6); *Ass’n of Battery Recyclers*, 716 F.3d at 673–74.

¹⁰ 955 F.3d 1088 (D.C. Cir. 2020).

¹¹ 89 FR 105986 (Dec. 27, 2024).

¹² See section IV.A.4 of this preamble for more information.

2. Petition for Reconsideration

In addition to amendments promulgated under CAA section 112(d)(6), this final action includes the EPA’s response to issues raised in an administrative petition submitted pursuant to CAA section 307(d)(7)(B) on certain aspects of the 2014 review of the PEPO NESHAP. In May 2014, the EPA received a petition for reconsideration of the PEPO NESHAP (40 CFR part 63, subpart PPP), Pesticide Active Ingredient Production NESHAP (40 CFR part 63, subpart MMM), and Group IV Polymers and Resins NESHAP (40 CFR part 63, subpart JJJ) pursuant to CAA section 307(d)(7)(B) from the Louisiana Environmental Action Network, Ohio Valley Environmental Coalition, and Sierra Club, collectively.¹³ For the PEPO NESHAP, the petitioners requested that the EPA: (1) remove the affirmative defense provisions from the rules in light of the judicial opinion in *NRDC v. EPA*;¹⁴ (2) provide adequate opportunity to comment on the requirements associated with emissions from pressure relief devices (PRDs) (including associated compliance dates, the EPA’s decision to not specifically require electronic indicators and alarms to monitor PRD releases to the atmosphere, and the standard’s applicability to PRDs in organic HAP service versus PRDs in total HAP service); (3) redo the risk assessment using updated emission factors; (4) set additional monitoring requirements for flares to reduce flaring emissions; (5) set fenceline monitoring requirements; (6) reconsider its decision not to set standards that account for developments in leak detection and repair (LDAR); and (7) use existing regulatory authority to strengthen chemical facility safety and prevent accidents in accordance with the U.S. Chemical Safety and Hazard Investigation Board and Executive Order 13650. On August 26, 2014, the EPA sent a letter to the petitioners informing them that the EPA was granting their request for reconsideration on issues (1) and (2).¹⁵ In the letter, the EPA also stated that it would initiate a notice-and-comment rulemaking on the issues for which the Agency granted reconsideration. The EPA addressed issue (1), the removal of affirmative defense provisions associated with the violation of air emission standards due

¹³ A copy of the petition and subsequent EPA correspondence granting reconsideration are in the docket for this rulemaking; see Document ID No. EPA-HQ-OAR-2023-0282-0044.

¹⁴ 749 F.3d 1055 (D.C. Cir. 2014).

¹⁵ A copy of the August 26, 2014, letter is in the docket for this rulemaking; see Document ID No. EPA-HQ-OAR-2023-0282-0045.

⁶ 42 U.S.C. 7412(a)(1).

⁷ *Id.* 7412(d)(2).

to malfunctions, in a separate rulemaking; therefore, this final rule does not address that issue.¹⁶ This action formally responds to the remaining issues concerning the PEPO NESHAP raised in the petition.¹⁷

D. Where can I get a copy of this document and other related information?

In addition to the docket, an electronic copy of this final action will be available on the internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at <https://www.epa.gov/stationary-sources-air-pollution/polyether-polyols-production-national-emission-standards-hazardous>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

Additional information is available on the Risk and Technology Review (RTR) website at <https://www.epa.gov/stationary-sources-air-pollution/risk-and-technology-review-national-emissions-standards-hazardous>. This information includes an overview of the RTR program and links to project websites for the RTR source categories.

E. Judicial Review and Administrative Reconsideration

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by May 18, 2026. CAA section 307(b)(2) prohibits a party from challenging this final rule separately in any civil or criminal proceedings brought by the EPA for enforcement.

CAA section 307(d)(7)(B) further provides that only an objection to a rule or procedure that was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time

specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the **FOR FURTHER INFORMATION CONTACT** section of this preamble and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

F. Severability

This final rule contains several discrete components, which the EPA views as severable as a practical matter—*i.e.*, they are functionally independent and will operate in practice independently of the other components. These discrete components are detailed in sections III.A through III.D of this preamble and the technical memoranda available in the docket. For example, the final requirements for equipment in organic HAP service, equipment in EtO service, flare operation and monitoring, transfer operations, and performance testing generally function independently of one another and would not be impacted if a reviewing court were to vacate one or more of the other final provisions. In addition, as this final rule revises an existing NESHAP, the EPA notes that if a reviewing court were to vacate one or more of the standards finalized here, the affected standards will revert to those present in the 2014 RTR final rule.

II. Background

A. What is the PEPO Production source category, and how does the NESHAP regulate HAP emissions from the source category?

The PEPO Production source category is the subject of this final action. The EPA promulgated the PEPO NESHAP on June 1, 1999, and codified the NESHAP at 40 CFR part 63, subpart PPP.¹⁸ As promulgated in 1999 and further amended on July 1, 2004,¹⁹ and March 27, 2014,²⁰ the PEPO NESHAP regulates HAP emissions from polyether polyol manufacturing process units (PMPUs)²¹

that produce PEPO²² as their primary product. A PMPU consists of purification systems, reactors and their associated product separators and recovery devices, distillation units and their associated distillate receivers and recovery devices, other associated unit operations, storage vessels, surge control vessels, bottoms receivers, product transfer racks, connected ducts and piping, and combustion, recovery, or recapture devices or systems. A PMPU also includes pumps, compressors, agitators, PRDs, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems.

Manufacturers use PEPO to make a variety of other products including lubricants, adhesives, sealants, cosmetics, pharmaceuticals, soaps, and feedstock for polyurethanes production. Urethane grade PEPO (*i.e.*, those that are free of water) serve as raw material in the production of polyurethanes, including slabstock and molded flexible foams, rigid foams, and other polyurethanes, including microcellular products, surface coatings, elastomers, fibers, adhesives, and sealants.

Facilities produce PEPO by polymerizing either epoxides (*i.e.*, a three-membered cyclic ether, such as EtO or propylene oxide) or tetrahydrofuran (THF). Facilities usually conduct the former process as a batch process and the latter as a continuous process. EtO and propylene oxide are both HAPs, but THF is not. In the original NESHAP, the EPA created two subcategories of PEPO based on the use of either epoxides or THF in polymerization.

The HAP emission sources at PEPO facilities include process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater. In the production of PEPO, facilities use HAP primarily as reactants or extraction solvents. HAP emitted from PEPO facilities include EtO, propylene oxide, toluene, methanol, and glycol ethers. The MACT standards for PEPO production include emission limits for process vents; a combination of equipment standards and work practices for storage vessels, wastewater, and

¹⁶ 90 FR 42323 (Sept. 2, 2025).

¹⁷ Although the issues identified in this paragraph (in addition to one other issue related to alternative compliance demonstration methods for periods of startup and shutdown) were also raised for 40 CFR part 63, subparts JJJ and MMM; this action does not respond to the reconsideration of these NESHAP, as the EPA is not reviewing those subparts in this action.

¹⁸ 64 FR 29420 (June 1, 1999).

¹⁹ 69 FR 39862 (July 1, 2004).

²⁰ 59 FR 17340 (Mar. 27, 2014).

²¹ A PMPU also includes flexible operation process units when an owner or operator cannot determine that a PEPO is not the primary product and a PEPO is produced or anticipated to be produced during time spans described in 40 CFR 63.1420(e)(2).

²² PEPO are compounds formed through the polymerization of EtO or propylene oxide or other cyclic ethers with compounds having one or more reactive hydrogens (*i.e.*, a hydrogen atom bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers (*i.e.*, compounds with two or more ether bonds). This definition of PEPO excludes cellulose ethers (such as methyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, hydroxyethyl cellulose, and hydroxypropyl methyl cellulose) and materials regulated under the HON, such as glycols and glycol ethers.

equipment leaks; and work practice standards for heat exchange systems.

As of December 1, 2025, the EPA identified 23 PEPO facilities in operation that are subject to the PEPO NESHAP. The list of facilities in the United States that are part of the PEPO Production source category with processes subject to the PEPO NESHAP is in the document titled *List of Facilities Subject to the PEPO NESHAP, for Final Rule*, which is in the docket for this action.²³

B. What changes did we propose for the PEPO Production source category in our December 27, 2024, proposal?

On September 18, 2023, the EPA received a complaint alleging that the Agency failed to undertake non-discretionary duties to conduct a technology review of the PEPO NESHAP at least every eight years, and on December 7, 2023, the plaintiffs amended the complaint to additionally allege that the Agency unreasonably delayed taking final agency action on reconsideration of the 2014 rule. As a result, on November 22, 2024, the EPA entered into a consent decree to take action on the reconsideration petition and the technology review of the PEPO NESHAP by December 10, 2025, later amended to March 13, 2026. The EPA's December 27, 2024, proposal addressed the Agency's statutory and consent decree obligation to conduct another technology review pursuant to CAA section 112(d)(6). However, the EPA also took the opportunity to conduct a second, "discretionary" residual risk review and proposed several standards based on the proposed results of that second review. This section explains what the EPA proposed with respect to the second, "discretionary" residual risk review, the mandatory eight-year technology review, and additional issues covered in the proposed rule.

1. Proposed Actions Related to CAA Section 112(f) Risk Assessment

The EPA proposed a second, "discretionary" residual risk review for the PEPO Production source category focused on emissions of EtO from PEPO sources. The EPA proposed control options for EtO under CAA section 112(f) to reduce risk from the PEPO Production source category as construed in the Agency's proposed findings. The EPA proposed under CAA section 112(f) to require additional control of EtO emissions from: (1) process vents, (2) storage vessels, (3) equipment leaks, (4) heat exchange systems, and (5)

wastewater "in ethylene oxide service."²⁴

- For process vents and storage vessels in EtO service, the EPA proposed that owners and operators reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by greater than or equal to 99.9 percent by weight or to a concentration less than 1 parts per million by volume (ppmv) for each process vent and storage vessel, or (2) venting emissions through a closed vent system to a flare meeting new proposed operating and monitoring requirements for flares. For process vents, the EPA also proposed an annual limit of 5 pounds per year (lb/yr) or less for all combined process vents as an alternative to the percent control and concentration options.

- For equipment leaks in EtO service, the EPA proposed the following combined requirements: monitoring of connectors in gas/vapor and light liquid service at a leak definition of 100 ppmv on a monthly basis with no reduction in monitoring frequency and no delay of repair; monthly monitoring of light liquid pumps at a leak definition of 500 ppmv; and monthly monitoring of gas/vapor and light liquid valves at a leak definition of 100 ppmv with no reduction in monitoring frequency and no delay of repair.²⁵

- For heat exchange systems in EtO service, the EPA proposed to require owners or operators to conduct more frequent leak monitoring (weekly instead of quarterly) and to repair leaks within 15 days from the sampling date (in lieu of the current 45-day repair requirement after receiving results of monitoring indicating a leak), and to not allow owners or operators to delay repairs.

- For wastewater in EtO service, the EPA proposed to revise the Group 1 wastewater stream threshold for sources to include wastewater streams in EtO service, and to prohibit owners and operators from injecting wastewater in EtO service into or disposing of water through any heat exchange system in a PMPU.

The EPA proposed that these requirements would reduce risk to an acceptable level for the PEPO Production source category and provide an ample margin of safety under the proposed approach to utilize CAA section 112(f)(2). We also proposed that

no additional requirements were needed to prevent an adverse environmental effect.

2. Proposed Actions Related to CAA Section 112(d)(6) Technology Review

Pursuant to the CAA section 112(d)(6) technology review for the PEPO NESHAP, the EPA proposed that no revisions to the current standards beyond the fenceline monitoring work practice standard discussed later in this preamble are necessary for wastewater streams. However, the Agency proposed additional changes under CAA section 112(d)(6) for heat exchange systems, storage vessels, process vents, and equipment leaks. The EPA also proposed a fenceline monitoring work practice standard under CAA section 112(d)(6).

- For heat exchange systems at existing and new affected sources, the EPA proposed requirements that owners or operators conduct quarterly monitoring (after an initial six months of monthly monitoring if not already completed) using the Modified El Paso Method and a leak definition of 6.2 ppmv of total strippable hydrocarbon concentration (as methane) in the stripping gas.²⁶

- For storage vessels at existing and new affected sources, the EPA proposed to revise applicability thresholds to require existing storage vessels between 38 cubic meters (m³) (10,000 gal) and 151 m³ (40,000 gal) with a vapor pressure ≥ 6.9 kilopascals (kPa) to add controls, and to require upgraded deck fittings and controls for guidepoles for all storage vessels equipped with an internal floating roof (IFR).

- For continuous process vents at existing and new affected sources associated with nonepoxide organic HAP (from making or modifying product) and process vents associated with existing and new affected sources that produce PEPO using THF, the EPA proposed to: (1) remove the total resource effectiveness (TRE) concept in its entirety; (2) remove 50 ppmv and 0.005 standard cubic meters per minute (scmm) Group 1 process vent thresholds associated with a PMPU using THF; and (3) redefine a Group 1 process vent (require control) as any process vent that emits ≥ 1.0 pounds per hour (lb/hr) of total organic HAP.

- For batch process vents at existing and new affected sources that are associated with the use of a nonepoxide organic HAP to make or modify the

²⁴ See 88 FR 25080 (Apr. 25, 2023) for the EPA's proposed definition of "in ethylene oxide service."

²⁵ Leak definition refers to the concentration at or above which the equipment is considered leaking, and the owner or operator must repair the leaking equipment.

²⁶ The Modified El Paso Method uses a dynamic or flow-through system for air stripping a sample of the water and analyzing the resultant off-gases for volatile organic compounds (VOC) using a common flame ionization detector analyzer.

²³ Docket ID No. EPA-HQ-OAR-2023-0282.

product, the EPA proposed to change the PEPO NESHAP control threshold from 26,014 lb/yr to 10,000 lb/yr and remove the associated flow rate applicability thresholds.

- For equipment leaks at existing and new affected sources, the EPA proposed to revise the leak definition from 500 ppmv to 100 ppmv for valves that are in either gas/vapor service or light liquid service.

- For managing fugitive emissions, the EPA proposed a fenceline monitoring work practice standard requiring owners and operators to monitor EtO if their site uses, produces, stores, or emits EtO, and conduct a root cause analysis and corrective action upon exceeding an annual average EtO concentration action level of 0.2 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

3. Proposed Actions Related to CAA Section 112(d)(2) and (3) and 112(h)

The EPA proposed other requirements for the PEPO NESHAP based on analyses performed pursuant to CAA section 112(d)(2) and (3) and 112(h) and to ensure that CAA section 112 standards apply continuously, as required by *Sierra Club v. EPA*.²⁷ These proposed requirements included:

- new monitoring and operational requirements for flares;
- regulatory provisions for vent control bypasses for closed vent systems containing bypass lines;
- work practice standards for startup and shutdown periods for maintenance vents and planned routine maintenance of storage vessels;
- new monitoring requirements for pressure vessels;
- new emission standards for surge control vessels and bottoms receivers;
- new emission standards for transfer operations;
- the addition of butylene oxide to the list of HAP presented in table 4 to 40 CFR 63, subpart PPP; and
- removal of exemption at 40 CFR 63.1420(d)(3) for certain processes currently excluded from the affected source as defined in 40 CFR 63.1420(a).

4. Other Proposed Actions

In addition to the actions described in sections II.B.1 through II.B.3 of this preamble, the EPA also proposed:

- to retain the existing PRD requirements in the PEPO NESHAP (in response to the Agency's reconsideration of issue (2) in the petition for reconsideration described in section I.C.2 of this preamble);
- to change the recordkeeping and reporting requirements to require the

use of the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI) for performance test reports, flare management plans, and periodic reports;

- to require subsequent performance testing once every five years to demonstrate compliance with emission limits for certain process vents (if you route emissions to a control device other than a flare);

- to eliminate the option in 40 CFR 63.1427(a)(2)(ii) that exempts owners or operators using extended cookout (ECO) as a control technique from the requirement to directly measure the concentration of unreacted epoxide of some products when determining the batch cycle percent epoxide emission reduction;²⁸

- to revise the phrasing in 40 CFR 63.1423(a) to refer to 40 CFR part 63, subpart F, where a definition in the PEPO NESHAP currently points to either 40 CFR part 63, subpart G or H;

- to add monitoring requirements for adsorbers that cannot be regenerated and regenerative adsorbers that are regenerated offsite;

- to find that the inclusion of 1-bromopropane (1-BP) as an organic HAP will not have any effect on the MACT standards; and

- to make additional changes that address technical and editorial corrections for the PEPO NESHAP.

III. What is included in this final rule?

Upon further consideration of the issues and public comments received, the EPA is finalizing EtO-specific standards (similar to those proposed under CAA section 112(f)(2)) under CAA section 112(d)(6) and is not finalizing the proposed second residual risk review for the PEPO Production source category (see section III.A of this preamble). The EPA is also finalizing the Agency's determinations pursuant to the technology review provisions of CAA section 112(d) for the PEPO Production source category and amending the PEPO NESHAP in several respects based on those determinations.²⁹ In this action, the EPA is also finalizing other changes to the PEPO NESHAP, including amendments pursuant to CAA section 112(d)(2) and

²⁸ ECO refers to extending the duration of the PEPO polymerization reaction to reduce the quantity of unreacted epoxides at the end of the reaction, thereby reducing epoxide emissions that would occur after opening the reactor. The PEPO NESHAP allows owners and operators to use ECO as a control technique to comply with the epoxide standard for process vents.

²⁹ See section III.B of this preamble for a summary of requirements the EPA is finalizing for the PEPO NESHAP under the technology review.

(3) and 112(h), described in sections III.C and III.D of this preamble. This action also reflects several changes to the December 27, 2024, proposal in consideration of comments received during the public comment period, as described in section IV of this preamble.

A. What are the final rule amendments based on the second residual risk review for the PEPO Production source category?

As explained later in this preamble, after further consideration of the issues and public comments received, the EPA is not finalizing the proposed second, "discretionary" residual risk review for the PEPO Production source category.³⁰ Consequently, the EPA is not finalizing any standards under CAA section 112(f)(2), although the Agency is finalizing EtO-specific standards under CAA section 112(d)(6), which requires periodic technology reviews and authorizes the Agency to revise the NESHAP "as necessary." The EtO-specific standards being finalized under CAA section 112(d)(6) are discussed in the following sections.

B. What are the final rule amendments based on the technology review for the PEPO Production source category?

For heat exchange systems, the EPA determined that developments in practices, processes, and control technologies have occurred that warrant revisions to the MACT standards for heat exchange systems in the PEPO Production source category. Therefore, pursuant to CAA section 112(d)(6) and consistent with the proposed rule, the EPA is revising the MACT standards for the heat exchange systems.³¹ These revisions will now require that owners and operators conduct quarterly monitoring for existing and new heat exchange systems (after an initial six months of monthly monitoring if not already completed) using the Modified El Paso Method and repair leaks of total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or greater.

The EPA is also finalizing, as proposed, a provision allowing owners and operators to use the current leak monitoring requirements for heat exchange systems at 40 CFR 63.104(b) in lieu of using the Modified El Paso Method, provided that 99 percent by weight or more of the organic

³⁰ See section IV.A of this preamble for additional details.

³¹ See 40 CFR 63.1435(a), which references the Hazardous Organic NESHAP (HON) (*i.e.*, 40 CFR 63.104(g) through (j) and (l)) and accounts for differences between the HON and the PEPO NESHAP.

²⁷ 551 F.3d 1019 (D.C. Cir. 2008).

compounds that could leak into the heat exchange system are both water soluble and have a Henry's Law Constant less than 5.0E-6 atmospheres-cubic meters/mol at 25 degrees Celsius. The EPA is also finalizing requirements under CAA section 112(d)(6) for heat exchange systems that emit EtO. For these heat exchange systems, the EPA is finalizing the term "in ethylene oxide service" at 40 CFR 63.1423(b) to mean any heat exchange system in a process that cools process fluids (liquid or gas) that are 1.0 percent or greater by weight of EtO. In addition, the EPA is finalizing a requirement to conduct monthly monitoring for leaks for heat exchange systems in EtO service using the Modified El Paso Method.³² If an owner or operator finds a leak, the EPA is requiring repair of the leak to reduce the concentration or mass emissions rate below the applicable leak action level as soon as practicable but no later than 45 days after the owner or operator receives results of monitoring tests indicating a leak. The EPA is also not allowing delay of repair of leaks for more than 30 days if subsequent monitoring determines the presence of a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv or higher.³³ Sections IV.B.2 through IV.B.4 of this preamble provide a more in-depth analysis of the decision to finalize additional requirements for heat exchange systems operating in EtO service, pursuant to CAA section 112(d)(6).

For storage vessels, the EPA determined that developments in practices, processes, and control technologies have occurred that warrant revisions to the MACT standards for storage vessels in the PEPO Production source category. Therefore, pursuant to CAA section 112(d)(6) and consistent with the proposed rule, the EPA is revising the MACT standards to change the Group 1 storage capacity criterion for storage vessels at new and existing sources, from the former range of 75 m³ (inclusive) to 151 m³ to the new range of 38 m³ (inclusive) to 151 m³,³⁴ and to require upgraded deck fittings and controls for guidepoles for all storage vessels equipped with an IFR, as already required in 40 CFR part 63, subpart WW.³⁵ The EPA is also finalizing requirements under CAA section 112(d)(6) for storage vessels that emit EtO. For these storage vessels, the EPA

is finalizing, pursuant to CAA section 112(d)(6), the term "in ethylene oxide service" at 40 CFR 63.1423(b) to mean that the concentration of EtO in the stored liquid is greater than or equal to 1.0 percent by weight. The EPA is finalizing at 40 CFR 63.1432(s) a requirement—by reference to the Hazardous Organic NESHAP (HON) (*i.e.*, 40 CFR 63.119(a)(5)) and accounting for differences between the HON and the PEPO NESHAP—that PEPO storage vessels in EtO service reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by at least 99.9 percent by weight or to a concentration less than 1 ppmv for each storage tank vent; or (2) venting emissions through a closed vent system to a flare meeting the flare operating requirements that the EPA is finalizing, as proposed, and discussed in section IV.C of this preamble.³⁶ Sections IV.B.2 through IV.B.4 later in this preamble provide a more in-depth analysis of decision to finalize additional requirements for storage vessels in EtO service pursuant to CAA section 112(d)(6).

For continuous process vent requirements, the final rule retains the use of the TRE index value concept and the current definition of a "Group 1 continuous process vent." This definition refers to a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product and that has: (1) a flow rate greater than or equal to 0.005 scmm, (2) a total organic HAP concentration greater than or equal to 50 ppmv, and (3) a TRE index value less than or equal to 1.0. However, for batch process vents, the EPA determined that there are developments in practices, processes, and control technologies that warrant revisions to the MACT standards for process vents in the PEPO Production source category. Therefore, pursuant to CAA section 112(d)(6), the EPA is revising the MACT standards, consistent with the proposed rule, to change the Group 1 combination of batch process vents threshold (for batch process vents that are associated with the use of a nonepoxide organic HAP to make or modify the product) from 26,014 lb/yr to 10,000 lb/yr and to remove the associated flow rate applicability threshold specified in the PEPO NESHAP at 40 CFR 63.1423(b). The EPA is also finalizing requirements under CAA section 112(d)(6) for process vents that emit EtO. For these process vents, the EPA is finalizing the term "in

ethylene oxide service" at 40 CFR 63.1423(b) to mean each process vent in a process that, when uncontrolled, contains a concentration of greater than or equal to 1 ppmv undiluted EtO, and when combined, the sum of all these process vents within the process would emit uncontrolled EtO emissions greater than or equal to 100 lb/yr (45.4 kilograms per year, kg/yr). The EPA is finalizing at 40 CFR 63.1425(g) a requirement that PEPO process vents in EtO service reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by at least 99.9 percent by weight, to a concentration less than 1 ppmv for each process vent, or to less than 100 lb/yr for all combined process vents within the process; or (2) routing emissions through a closed vent system to a flare meeting the flare operating requirements that the EPA is finalizing, as proposed and as discussed in section IV.C of this preamble.³⁷ Sections IV.B.2 through IV.B.4 of this preamble provide a more in-depth analysis of the decision to finalize requirements for process vents in EtO service pursuant to CAA section 112(d)(6).

The EPA's proposed technology review for wastewater streams concluded that no developments in practices, processes, or control technologies warrant revisions to the MACT standards. However, this was because the Agency proposed stringent EtO-specific standards under CAA section 112(f)(2) and thus proposed to conclude that additional standards were not "necessary" under CAA section 112(d)(6). In response to comments recommending that the EPA evaluate the proposed EtO-specific standard for wastewater under CAA section 112(d)(6), the EPA is finalizing an EtO-specific standard for wastewater as "necessary" under CAA section 112(d)(6) rather than under CAA section 112(f)(2) as initially proposed.

Based on this evaluation, the EPA is finalizing additional requirements under CAA section 112(d)(6) for wastewater that contains, and thus emits, EtO. For these wastewater streams, the EPA is finalizing the term "in ethylene oxide service" at 40 CFR 63.1423(b) to mean any wastewater stream that contains a total annual average concentration of EtO greater than or equal to 10 parts per million by weight (ppmw) at any flow rate. The EPA is finalizing at 40 CFR 63.1433(s)(23) a requirement—by reference to the HON and accounting for differences between the HON and the

³² See 40 CFR 63.1435(i), which references the HON and accounts for differences between the HON and the PEPO NESHAP.

³³ See 40 CFR 63.1435(i).

³⁴ See table 3 to 40 CFR part 63, subpart PPP.

³⁵ See 40 CFR 63.1432, which refers to the HON including 40 CFR 63.119(b)(5)(ix), (x), (xi), and (xii).

³⁶ See 40 CFR 63.1436.

³⁷ See 40 CFR 63.1436.

PEPO NESHAP—that owners and operators reduce the concentration of EtO of each wastewater stream, by removal or destruction, to a level less than 1 ppmw, or comply with the Group 1 wastewater stream control requirements outlined in 40 CFR 63.138(d) or (e). Additionally, the EPA is finalizing an exemption to this requirement for wastewater streams in EtO service that cumulatively contain less than 1 megagram (approximately 1.1 tons) of EtO per year. Sections IV.B.2 through IV.B.4 of this preamble provide a more in-depth analysis of the decision to finalize requirements for wastewater in EtO service pursuant to CAA section 112(d)(6).

For equipment leaks, the EPA determined there are developments in practices, processes, and control technologies that warrant revisions to the MACT standards for equipment leaks in the PEPO Production source category. Therefore, pursuant to CAA section 112(d)(6) and consistent with the proposed rule, the EPA is revising the MACT standards to use a leak definition of 100 ppmv for valves that are in either gas/vapor service or light liquid service.³⁸ The EPA is also finalizing requirements under CAA section 112(d)(6) for equipment that emits EtO via equipment leaks. For this equipment, the EPA is finalizing the term “in ethylene oxide service” at 40 CFR 63.1423(b) to mean any equipment that contains or contacts a fluid (liquid or gas) that is at least 1.0 percent by weight EtO. The EPA is finalizing at 40 CFR 63.1434(a)(3) requirements—by reference to the HON and accounting for differences between the HON and the PEPO NESHAP—for quarterly monitoring at a leak definition of 100 ppmv for connectors in gas and vapor service or in light liquid service in EtO service, monthly monitoring at a leak definition of 100 ppmv for valves in gas and vapor service or in light liquid service in EtO service, and monthly monitoring at a leak definition of 500 ppmv for pumps in light liquid service in EtO service. Additionally, the EPA is finalizing requirements for owners or operators to repair a detected leak as soon as practicable but no later than 15 days after collecting the sample, allowing delayed repair for a small amount of equipment in EtO service.³⁹ Sections IV.B.2 through IV.B.4 later in this preamble provide a more in-depth analysis of the decision to finalize additional requirements for equipment

in EtO service pursuant to CAA section 112(d)(6).

Section III.E of this preamble provides a detailed discussion of the effective and compliance dates for the requirements the EPA is finalizing in this action for the PEPO NESHAP. Section IV.B.3 of this preamble provides a summary of key comments the EPA received on the proposed CAA section 112(d)(6) provisions and the Agency’s responses. Section IV.B.3 also explains the basis for the EPA’s decision to finalize specific requirements for EtO emissions under CAA section 112(d)(6).

C. What are the final rule amendments we are taking pursuant to CAA section 112(d)(2) and (3) and 112(h) for the PEPO Production source category?

Consistent with *Sierra Club v. EPA*⁴⁰ and the proposed rule,⁴¹ the EPA is revising monitoring and operational requirements for flares to ensure that PEPO flares meet MACT standards at all times when controlling HAP emissions.⁴² In addition, the EPA is finalizing provisions and clarifications for bypass lines on closed vent systems.⁴³ The EPA is also finalizing work practice standards for certain activities where alternatives are appropriate, including:

- maintenance vents and equipment openings (excluding storage vessel degassing);⁴⁴
- storage vessel degassing;⁴⁵ and
- planned routine maintenance for storage vessels.⁴⁶

The EPA is also finalizing the proposed requirements for several other PEPO emission sources, including:

- pressure vessels;⁴⁷
- surge control and bottoms receivers;⁴⁸
- transfer racks;⁴⁹
- process units using butylene oxide;⁵⁰ and

⁴⁰ 551 F.3d 1019 (D.C. Cir. 2008).

⁴¹ 89 FR 105986 (Dec. 27, 2024).

⁴² See 40 CFR 63.1436.

⁴³ See 40 CFR 63.1425(f), by references to 40 CFR 63.114(d)(2) and (3), 63.118(a)(5) and (f)(7), 40 CFR 63.1429(c)(3), and 40 CFR 63.1430(d)(6) and (h)(7).

⁴⁴ See 40 CFR 63.1425(f) by reference to 40 CFR 63.113(k) for process vents at PMPUs that produce PEPO products using THF, and 40 CFR 63.1425(h) for all other regulated PEPO process vents.

⁴⁵ See 40 CFR 63.1432(a), by reference to 40 CFR 63.119(a)(6).

⁴⁶ See 40 CFR 63.1432(a), by reference to 40 CFR 63.119(e)(7).

⁴⁷ See 40 CFR 63.1432(a), by reference to 40 CFR 63.119(a)(7).

⁴⁸ See 40 CFR 63.1434(a)(7).

⁴⁹ See 40 CFR 63.1434(i), which references the HON at 40 CFR 63.126 through 63.130 and accounts for difference between the HON and the PEPO NESHAP.

⁵⁰ See 40 CFR 63.1423(b) for the definition of “epoxide” and the list of HAP presented in table 4 to the PEPO NESHAP.

- affected source reactions or processing that occur after completion of epoxide polymerization and all catalyst removal steps, if any (which may include, but are not limited to, solvent removal, purification, drying, and solids handling operations).⁵¹

The EPA is finalizing the requirements with a few changes from the proposed rule, after considering comments the EPA received during the public comment period. In response to comments received on the proposed provisions for flares, the EPA is allowing the use of pressure-assisted multi-point flares as a control option, provided they meet certain operational and monitoring requirements. In response to comments received on the proposed provisions for affected source reactions or processing that occur after completion of epoxide polymerization and all catalyst removal steps, the EPA is including overlap provisions for owners and operators currently complying with the Miscellaneous Organic Chemical Manufacturing NESHAP (MON).

The comments and the EPA’s specific responses to the items discussed earlier in this preamble are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking, and in section IV.C.3 of this preamble.

D. What other changes have we made to the NESHAP?

This rule also finalizes, as proposed, revisions to several other PEPO NESHAP requirements. This section describes these revisions, as well as other provisions that have changed since proposal.

To increase the ease and efficiency of data submittal and data accessibility, the EPA is finalizing, as proposed, a requirement that owners or operators submit electronic copies of continuous monitoring system performance evaluations,⁵² flare management plans, Notification of Compliance Status reports, and periodic reports through the EPA’s CDX using the CEDRI.⁵³ The PEPO NESHAP already requires electronic submittal of performance test results collected using test methods that are compatible with the EPA-provided

⁵¹ See 40 CFR 63.1420(d)(3).

⁵² If a continuous emission monitoring system (CEMS) is used to continuously monitor the EtO concentration at the exit of an air pollution control device (APCD) as allowed at 40 CFR 63.1426(g) and 40 CFR 63.1432(s), by reference to 40 CFR 63.124.

⁵³ See 40 CFR 63.1436(b); and 40 CFR 63.1439(e)(5), (6), and (9).

³⁸ See 40 CFR 63.1434(a)(6).

³⁹ See 40 CFR 63.1434(a)(3).

software. In addition to the new electronic reporting requirements, the EPA is making minor updates to the electronic reporting language for performance tests that do not change the requirements but reflect the EPA's current electronic reporting process (e.g., noting the required software and the system to which the reports are submitted). A description of the electronic data submission process is in the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*.⁵⁴ The final rule requires that owners and operators submit performance test results in the format generated through the use of the EPA's Electronic Reporting Tool (ERT) or an electronic file consistent with the XML schema on the ERT website.⁵⁵ Similarly, owners and operators must submit performance evaluation results of CEMS in the format generated through the use of the ERT or an electronic file consistent with the XML schema on the ERT website. For both performance test results and CEMS performance evaluation results, all the information required by 40 CFR 63.7(g)(2) in PDF format must accompany electronic files consistent with the XML schema on the ERT website.

For periodic reports, the final rule requires that owners or operators use the appropriate spreadsheet template to submit information to CEDRI. The EPA has made minor clarifying edits to the spreadsheet templates based on comments received during the public comment period. The final version of the template for these reports will be on the CEDRI website.⁵⁶ The final rule requires that owners or operators submit flare management plans as a PDF upload in CEDRI. For a more detailed discussion of these final amendments, see section III.E.2 of the proposal preamble, as well as sections IV.D and VI.C of this preamble.

The EPA is also finalizing at 40 CFR 63.1437(a), as proposed, performance testing once every five years to demonstrate compliance with emission limits for certain process vents that route emissions to a control device other than a flare. Specifically, the EPA is finalizing the removal of the design evaluation option at 40 CFR 63.1426(b)(6) and (7) and (f) and requiring ongoing performance tests for

owners and operators using a combustion, recovery, or recapture device to comply with: an epoxide or organic HAP percent reduction efficiency requirement in 40 CFR 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2); an epoxide concentration limitation in 40 CFR 63.1425(b)(1)(ii) or (b)(2)(iii); or an annual epoxide emission limitation in 40 CFR 63.1425(b)(1)(iii) or (b)(2)(iv).

The EPA is also finalizing, as proposed, the elimination of the option in 40 CFR 63.1427(a)(2)(ii) that exempts owners and operators using ECO as a control technique from the requirement to directly measure the concentration of unreacted epoxide for a representative product of each product class when determining the batch cycle percent epoxide emission reduction. However, based on comments received on the proposed rulemaking, in the final rule the EPA is limiting the number of product classes requiring direct measurement.⁵⁷

Also, the EPA is finalizing as proposed both the phrasing used in 40 CFR 63.1423(a) to refer to 40 CFR part 63, subpart F, in instances where a definition in the PEPO NESHAP points to either 40 CFR part 63, subpart G or H, and the clarifying revisions to 40 CFR 63.1423(b) to reference the correct HON citation for "continuous recorder," "maximum true vapor pressure," "residual," and "waste management unit." Additionally, the EPA is finalizing the proposed definition of "heat exchange system" at 40 CFR 63.1423(b) to mean a device or collection of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (i.e., non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system) or a once-through system (e.g., river or pond water). For closed-loop recirculation systems, the heat exchange system consists of a cooling tower, all PMPU heat exchangers that are in organic HAP service and serviced by that cooling tower, and all water lines to and from these process unit heat exchangers. For once-through systems, the heat exchange system consists of all heat exchangers in an individual PMPU that are in organic HAP service and all water lines to and from these heat exchangers. Sample coolers or pump seal coolers are not considered heat exchangers for the purpose of this definition and are not part of the heat exchange system. Intentional direct contact with process fluids results in the

formation of a wastewater. The EPA is also finalizing the proposed definition of "in organic HAP service" to include a heat exchange system, to be consistent with the use of "in organic HAP service" in the definition of "heat exchange system."

In addition, the EPA is finalizing requirements, as proposed, at 40 CFR 63.1429(a)(9) for owners or operators using adsorbers that cannot be regenerated or using regenerative adsorbers that are regenerated offsite to use dual (two or more) adsorbent beds in series and to conduct monitoring of HAP or total organic compound (TOC) on the outlet of the first adsorbent bed in series using a sample port and a portable analyzer or chromatographic analysis. Lastly, the EPA is finalizing all the revisions that the Agency proposed for clarifying text and correcting typographical errors, grammatical errors, and cross-reference errors. The EPA discussed these editorial corrections and clarifications in section IV.E.7 of the proposal preamble. The EPA is also including several minor clarifying edits in the final rule based on comments received during the public comment period.

The comments and the EPA's specific responses to the items discussed in this section are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking, and section IV.D.3 of this preamble.

E. What are the effective and compliance dates of the standards?

For all the requirements the EPA is finalizing under CAA section 112(d)(2), (3), and (6) and 112(h), all existing affected sources and all affected sources that were new sources under the previous PEPO NESHAP (i.e., any source that commenced construction or reconstruction after September 4, 1997, and on or before December 27, 2024) must comply with all of the amendments no later than March 18, 2029, or upon startup, whichever is later. For existing sources, CAA section 112(i) provides that the compliance date for standards promulgated under section 112(d) shall be as expeditious as practicable, but no later than three years after the effective date of the standard.⁵⁸ The EPA agrees with commenters that owners and operators need at least three

⁵⁴ Document ID No. EPA-HQ-OAR-2023-0282-0016.

⁵⁵ <https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>.

⁵⁶ <https://www.epa.gov/electronic-reporting-air-emissions/cedri>.

⁵⁷ See 40 CFR 63.1427(a)(2)(iii).

⁵⁸ *Ass'n of Battery Recyclers*, 716 F.3d at 672 ("Section 112(i)(3)'s three-year maximum compliance period applies generally to any emission standard . . . promulgated under [section 112].").

years to implement the requirements the Agency is finalizing under CAA section 112(d)(2), (3), and (6).⁵⁹ For example, for process vents and storage vessels in EtO service, if an affected source has uncontrolled process vents or storage vessels that meet the definition of “in ethylene oxide service,” owners or operators may need to install a new control system, such as a thermal oxidizer with piping, ductwork, etc. Owners or operators may require additional permits (e.g., New Source Review and/or title V operating permit modifications) to install new emission control equipment. Moreover, owners and operators need at least three years to understand the final rule changes; revise site guidance and compliance programs; ensure operations can meet the standards during startup and shutdown; update operation, maintenance, and monitoring plans; upgrade emission capture and control systems; install new flare monitoring equipment; and install new process control systems. As provided in CAA section 112(i) and 5 U.S.C. 801(3), all new affected sources that commenced construction or reconstruction after December 27, 2024, must comply with all requirements under CAA section 112(d)(2), (3), (6), and 112(h) by March 18, 2026, or upon startup, whichever is later. The EPA provided additional rationale for these compliance dates in the preamble to the proposed rule. The EPA is also finalizing provisions, as proposed, that provide 60 days after the publication date of the final rule (or upon startup, whichever is later) for owners or operators of affected sources to comply with the requirement to submit Notification of Compliance Status reports electronically. The EPA is finalizing provisions that provide 60 days after the publication date of the final rule for owners or operators of affected sources to comply with the requirement to submit the results of CEMS performance evaluations electronically. The EPA is also finalizing provisions, as proposed, that provide three years after the publication date of the final rule for owners or operators of affected sources to comply with the requirements to submit periodic reports and flare management plans electronically.

IV. What is the rationale for our final decisions and amendments for the PEPO Production source category?

For each issue, this section provides a description of what the EPA proposed and what the Agency is finalizing, the EPA’s rationale for the final decisions and amendments, and a summary of key comments and responses. For all comments not discussed in this preamble, comment summaries and the EPA’s responses are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

A. Second Residual Risk Review for the PEPO Production Source Category

1. What did we propose pursuant to CAA section 112(f) for the PEPO Production source category?

Although the EPA’s statutory and consent decree obligations are limited to the technology review requirement in CAA section 112(d)(6) and reconsideration of specific 2014 RTR issues, the EPA proposed a second, “discretionary” residual risk review for the PEPO Production source category along with EtO-specific standards intended to reduce risk based on the proposed findings. In this proposed review, the EPA identified six facilities that emit EtO from process vents, storage vessels, equipment leaks, or wastewater and have estimated individual cancer risks greater than 100-in-1 million in nearby communities. Additionally, in the proposed review, the EPA noted that an allowable leak of EtO from a heat exchange system could contribute to individual cancer risks greater than 100-in-1 million. Thus, the EPA proposed control options under CAA section 112(f) to reduce EtO risk from the PEPO Production source category.

In connection with the proposed second residual risk review, the EPA proposed to require further control of EtO emissions from: (1) process vents, (2) storage vessels, (3) equipment leaks, (4) heat exchange systems, and (5) wastewater in EtO service. The proposed definitions for being in EtO service included:

- For process vents, the EPA proposed “in ethylene oxide service” to mean that when uncontrolled, each process vent contains a concentration of greater than or equal to 1 ppmv undiluted EtO, and when combined, the sum of all process vents within the process would emit uncontrolled EtO

emissions greater than or equal to 5 lb/yr.

- For storage vessels of any capacity and vapor pressure, the EPA proposed “in ethylene oxide service” to mean that the concentration of EtO within the tank liquid is greater than or equal to 0.1 percent by weight.

- For equipment leaks, the EPA proposed “in ethylene oxide service” to mean any equipment that contains or contacts a fluid (liquid or gas) that is at least 0.1 percent by weight of EtO.

- For heat exchange systems, the EPA proposed “in ethylene oxide service” to mean any heat exchange system in a process that cools process fluids (liquid or gas) that are 0.1 percent or greater by weight of EtO.

- For wastewater, the EPA proposed “in ethylene oxide service” to mean any wastewater stream that contains total annual average concentration of EtO greater than or equal to 1 ppmw at any flow rate.

For process vents and storage vessels in EtO service, the EPA proposed that owners and operators reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by greater than or equal to 99.9 percent by weight or to a concentration less than 1 ppmv for each process vent and storage vessel, or (2) venting emissions through a closed vent system to a flare that meets new proposed operating and monitoring requirements for flares. For process vents, the EPA also proposed an annual limit of 5 lb/yr or less for all combined process vents as an alternative to the percent control and concentration options. For equipment leaks in EtO service, the EPA proposed the following combined requirements: monitoring of connectors in gas/vapor and light liquid service at a leak definition of 100 ppmv on a monthly basis with no reduction in monitoring frequency and no delay of repair; monthly monitoring of light liquid pumps at a leak definition of 500 ppmv; and monthly monitoring of gas/vapor and light liquid valves at a leak definition of 100 ppmv with no reduction in monitoring frequency and no delay of repair. For heat exchange systems in EtO service, the EPA proposed to require owners or operators to conduct more frequent leak monitoring (weekly instead of quarterly) and to repair leaks within 15 days from the sampling date (in lieu of the current 45-day repair requirement after receiving results of monitoring indicating a leak), and to not allow owners or operators to delay repairs. For wastewater in EtO service, the EPA proposed to revise the Group 1

⁵⁹ See section 7.0 of U.S. EPA, *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, in the docket for this rulemaking.

wastewater stream threshold for sources to include wastewater streams in EtO service and to prohibit owners and operators from injecting wastewater in EtO service into or disposing of water through any heat exchange system in a PMPU.

In all cases, the EPA proposed that if information exists that suggests EtO could be present in these processes, the emission source is considered to be in EtO service unless the owner or operator conducts the procedures specified in 40 CFR 63.109 to demonstrate that the emission source does not meet the definition of being in EtO service. The EPA proposed that examples of information that could suggest EtO is present in a process stream include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results, provided the results are still relevant to the current operating conditions.

At the time of proposal and in the context of proposing to use CAA section 112(f)(2) for this purpose, the EPA found that these proposed requirements would reduce risk to an acceptable level and provide an ample margin of safety to protect public health, and no additional requirements were necessary to prevent an adverse environmental effect.

2. How did the risk review change for the PEPO Production source category?

In this final rule, the EPA is not finalizing the proposed second residual risk review for the PEPO Production source category and instead is assessing and finalizing EtO-specific standards pursuant to CAA section 112(d)(6). Consequently, the EPA is not finalizing the EtO-specific standards outlined in section IV.A.1 in this action under CAA section 112(f)(2).

3. What key comments did we receive on the risk review, and what are our responses?

The EPA received numerous comments in support of and in opposition to the Agency's proposed second residual risk review for the PEPO Production source category. As the EPA has decided to not finalize any components of the proposed second residual risk review for the PEPO Production source category, the Agency is not including in this final preamble any comment summaries or responses that are related to the proposed second residual risk review authority, methodology or findings. Instead, all these comments summaries are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air*

Pollutants for Polyether Polyols Production Industry in the docket for this rulemaking. This section provides a summary of and response to commenters' requests to consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of CAA section 112(f)(2).

Comment: Regarding the decision to propose a second residual risk review under CAA section 112(f)(2), some commenters supported the risk review, but multiple commenters urged the EPA to consider regulatory alternatives that provide the EPA with more flexibility. Commenters noted that the EtO-specific standards are driven by technology developments for emissions control devices and monitoring requirements and are thus aligned with the CAA section 112(d)(6) technology review. Commenters emphasized that the EPA should consider cost when setting EtO-specific standards. Commenters also stated that the EPA should allow facilities three years to comply with the new EtO-specific standards.

Specifically, multiple commenters suggested that the EPA consider evaluating EtO-specific standards (for process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in EtO service) under CAA section 112(d)(6) instead of under CAA section 112(f)(2). For example, one commenter urged the EPA to "withdraw the risk-based portions of the proposal and repropose under the technology review provisions" and that "more reasonable actions could achieve meaningful reductions of E[t]O . . . while providing feasible reductions and protecting the supply chain."⁶⁰ The commenter also requested that the EPA promulgate cost-effective standards for equipment leaks under CAA section 112(d)(6) that will reduce emissions of both organic HAP and EtO. Another commenter stated that the EPA "should categorize and base the proposed ethylene oxide requirements for Process Vents, Storage Tanks, and Wastewater under Section 112(d) of the Clean Air Act instead of under the Section 112(f) residual risk requirements." The commenter continued, "In some cases, capital projects will have to be implemented to meet the new emission standards. The details of these requirements are largely developments in technology that require installing or revising air pollution control equipment for process vents or storage tanks and installing unit operations to remove ethylene oxide from process wastewater streams. These technologies will also

require testing to confirm removal efficiency or outlet concentrations along with the establishment of operating parameters, and the continuous monitoring of operating parameters. In some cases, the owner or operator will have to request approval of the operating parameters to monitor from regulatory agencies on a case-by-case basis. Taken together, these requirements align more with Section 112(d) of the Clean Air Act."⁶¹

Response: The EPA agrees with commenters that it is more appropriate to evaluate EtO-specific standards under CAA section 112(d)(6). CAA section 112(d)(6) provides that the EPA should consider cost in deciding whether to revise the standards and allows a maximum compliance timeline of three years (in contrast to the maximum of two years allowed by CAA section 112(f)(2)). While the EPA may have proposed EtO-specific standards under CAA section 112(f)(2), the proposal demonstrated that there are developments in practices, processes, and control technologies for reducing EtO emissions that merit evaluation under CAA section 112(d)(6). As explained in section IV.B.3 of this preamble, the EPA's evaluation under CAA section 112(d)(6) finds it appropriate to revise the PEPO NESHAP to include additional standards for EtO. The EPA also agrees that facilities would encounter significant difficulties complying with some of the proposed requirements within two years as required by CAA section 112(f)(2).

4. What is the rationale for our final approach and final decisions for the risk review?

In 2014, the EPA finalized a residual RTR for the PEPO NESHAP under the provisions of CAA section 112(f)(2) and (d)(6).⁶² In 2024, the EPA proposed a second residual risk review for the PEPO Production source category and proposed to address residual risks associated with EtO emissions from this source category, both pursuant to CAA section 112(f)(2). This was consistent with other recent approaches taken by the EPA to address EtO emissions from chemical manufacturing facilities such as the 2024 rulemaking amending the HON.⁶³ The EPA is not finalizing the residual risk review or the risk-based standards proposed in 2024 pursuant to CAA section 112(f)(2). Several commenters requested that the EPA

⁶¹ Comment ID No. EPA-HQ-OAR-2023-0282-0099.

⁶² 79 FR 17340 (Mar. 27, 2014).

⁶³ See 89 FR 42932 (May 16, 2024), 2024 final rule amending the HON.

⁶⁰ Comment ID No. EPA-HQ-OAR-2023-0282-0103.

consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of under CAA section 112(f)(2). The EPA agrees with these commenters that, in this circumstance, the technology review is the more appropriate authority to use to target EtO emissions. The EPA also notes that the consent decree requiring review of this NESHAP specifies that a technology review under CAA section 112(d)(6) must be completed, but it does not require a residual risk review under CAA section 112(f)(2). The EPA acknowledges that the evaluations conducted for the proposed CAA section 112(f)(2) review demonstrated that there are developments in practices, processes, or technology that can meaningfully reduce EtO emissions for the PEPO Production source category. Thus, in response to comments that the CAA section 112(d)(6) framework is more appropriate to analyze these options, the EPA is finalizing revisions that reflect those developments under the CAA section 112(d)(6) authority, which requires the Agency to consider factors such as cost, in lieu of finalizing the proposed CAA section 112(f)(2) review. See section IV.B.2 of this preamble for details regarding the EPA's CAA section 112(d)(6) review for reducing EtO emissions. The EPA notes that these finalized EtO-specific CAA section 112(d)(6) standards result in projected overall EtO emissions reductions from the PEPO source category similar to those reductions projected for the proposal. For all six facilities estimated in the proposed risk assessment to have baseline source category cancer risks greater than 100-in-1 million in nearby communities, the EPA estimates that the final rule will result in significant emissions reductions from baseline, which would lead to significant risk reductions compared to baseline. Revisions to the baseline EtO emissions estimate of one of the facilities have been incorporated into the EPA's final impact analysis. More information about the estimated impacts of this final action is in the document titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking.

B. Technology Review for the PEPO Production Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the PEPO Production source category?

Based on the EPA's technology review for the PEPO Production source category, the Agency proposed changes

under CAA section 112(d)(6) to the PEPO NESHAP for heat exchange systems, storage vessels, process vents, and equipment leaks in organic HAP service. In addition, the EPA proposed no change under CAA section 112(d)(6) for wastewater streams in organic HAP service. The EPA also proposed fenceline monitoring requirements under CAA section 112(d)(6). This section provides a summary of the Agency's findings, as proposed in 2024.

a. Heat Exchange Systems

In the EPA's technology review for the PEPO Production source category, the Agency identified one development in practices and processes for PEPO heat exchange systems in organic HAP service—the use of the Modified El Paso Method for monitoring for leaks from heat exchange systems.⁶⁴ The EPA determined that this method is more effective in identifying leaks and measures a larger number of compounds than the previously required methods in the PEPO NESHAP. After evaluating state and Federal regulations requiring the Modified El Paso Method and emission data collected for the Ethylene Production RTR,⁶⁵ the EPA proposed pursuant to CAA section 112(d)(6) to require use of the Modified El Paso Method with a leak definition of 6.2 ppmv of total strippable hydrocarbon concentration (as methane) in the stripping gas to further reduce HAP emissions from both new and existing heat exchange systems, as well as to disallow delay of repair of leaks if the measured concentration meets or exceeds 62 ppmv. Based on an evaluation of incremental HAP cost effectiveness to increase the monitoring frequency, the EPA proposed no changes to the monitoring frequency in the PEPO NESHAP for monitoring for leaks from heat exchange systems, which continues to be monthly monitoring in the first six months following startup of a source and quarterly monitoring thereafter. The EPA also proposed to require re-monitoring at the relevant monitoring location after repair of a leak to ensure the repair was successful. Further, the EPA proposed that none of these proposed requirements for heat exchange systems apply to heat

exchange systems that have a maximum cooling water flow rate of 10 gallons per minute or less. Finally, the EPA proposed that owners and operators may use the current leak monitoring requirements for heat exchange systems at 40 CFR 63.104(b) in lieu of using the Modified El Paso Method, provided that 99 percent by weight or more of the organic compounds that could leak into the heat exchange system are water soluble and have a Henry's Law Constant less than 5.0E-6 atmospheres-cubic meters/mol at 25 degrees Celsius. See section IV.C.1 of the proposal preamble for a summary of the EPA's rationale for selecting the proposed leak method, leak definition, and limitation on delay of repairs, as well as the Agency's rationale for retaining the previous monitoring schedule.

For a detailed discussion of the EPA's findings, see the document titled *Clean Air Act Section 112(d)(6) Technology Review for Heat Exchange Systems Located in the PEPO Production Source Category that are Associated with Processes Subject to the PEPO NESHAP*.⁶⁶

b. Storage Vessels

In the EPA's technology review for the PEPO Production source category, the EPA identified three control options for further reducing emissions from PEPO storage vessels in organic HAP service. See section IV.C.2 of the proposal preamble for a summary of the three options. Based on the evaluation of the costs and emission reductions of each of the three options, the EPA proposed, pursuant to CAA section 112(d)(6), to: (1) revise the Group 1 PEPO storage vessel capacity and maximum true vapor pressure (MTVP) thresholds to reflect the HON existing source threshold, which requires existing storage vessels between 38 m³ (inclusive) and 151 m³ with a vapor pressure greater than or equal to 6.9 kPa to reduce emissions of organic HAP by 95 percent utilizing a closed vent system and control device, or to reduce organic HAP emissions by utilizing an IFR, an external floating roof, routing the emissions to a process or a fuel gas system, or vapor balancing; and (2) require upgraded deck fittings and controls for guidepoles for all storage vessels equipped with an IFR.⁶⁷

⁶⁴ Texas Commission on Environmental Quality, Sampling Procedures Manual, Appendix P: *The Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound (VOC) Emissions from Water Sources* (included in EPA-HQ-OAR-2023-0282-0030) describes in the detail the Modified El Paso Method. Appendix P is included in the docket for this rulemaking.

⁶⁵ See section II.D of the proposal preamble and the Ethylene Production RTR rulemaking docket, Docket ID No. EPA-HQ-OAR-2017-0357.

⁶⁶ Document ID No. EPA-HQ-OAR-2023-0282-0072.

⁶⁷ The EPA requires all openings in an IFR (except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and deck drains) to be equipped with a deck cover, and the deck cover is required to be equipped with a gasket between the cover and the deck.

For a detailed discussion of the EPA's findings, see the document titled *Clean Air Act Section 112(d)(6) Technology Review for Storage Vessels Located in the PEPO Production Source Category that are Associated with Processes Subject to the PEPO NESHAP*.⁶⁸

c. Process Vents

The EPA's technology review for PEPO process vents in organic HAP service did not identify any control options associated with: (1) epoxide (i.e., EtO, propylene oxide, butylene oxide, and epichlorohydrin) emissions resulting from the use of these chemicals as reactants or (2) emissions of nonepoxide organic HAP resulting from their use in catalyst extraction. However, the EPA identified three emission reduction options as part of the Agency's technology review for continuous process vents associated with nonepoxide organic HAP from making or modifying product and process vents associated with affected sources that produce PEPO using THF. See section IV.C.3 of the proposal preamble for a summary of the three options. Based on the EPA's evaluation of the costs and emission reductions of each of the three options, the Agency proposed pursuant to CAA section 112(d)(6) to remove the TRE index value concept in its entirety from the PEPO NESHAP. The EPA also proposed, pursuant to CAA section 112(d)(6), to remove the 50 ppmv and 0.005 scmm thresholds from the Group 1 definition for continuous process vents associated with nonepoxide organic HAP and the Group 1 process vent applicability associated with a PMPU using THF and instead to require owners and operators of these process vents that emit greater than or equal to 1.0 lb/hr of total organic HAP to meet the current control standards in the PEPO NESHAP. In addition, the EPA identified one option for reducing emissions from the combination of batch process vents that are associated with the use of a nonepoxide organic HAP to make or modify the product. Consequently, the EPA proposed pursuant to CAA section 112(d)(6) to revise the PEPO NESHAP control threshold for these batch process vents from 26,014 lb/yr to 10,000 lb/yr and to remove the associated flow rate applicability thresholds (including the Group 1 process vent thresholds of annual organic HAP emissions mass flow rate, cutoff flow rate, and annual average batch vent flow rate from the definition of "Group 1 combination of

batch process vents" specified in the PEPO NESHAP at 40 CFR 63.1423(b)).

For a detailed discussion of the EPA's findings, see the document titled *Clean Air Act Section 112(d)(6) Technology Review for Batch and Continuous Process Vents in the PEPO Production Source Category that are Associated with Processes Subject to the PEPO NESHAP*.⁶⁹

d. Equipment Leaks

In the EPA's technology review for the PEPO Production source category, the EPA identified three control options for further reducing emissions from leaks of equipment in organic HAP service at PEPO facilities. See section IV.C.5 of the proposal preamble for a summary of the three options. Based on the EPA's evaluation of the costs and emission reductions of each of the three options, the Agency proposed pursuant to CAA section 112(d)(6) to revise the PEPO NESHAP to use a leak definition of 100 ppmv for valves that are in either gas/vapor service or light liquid service.

For a detailed discussion of the EPA's findings, see the document titled *Clean Air Act Section 112(d)(6) Technology Review for Equipment Leaks Located in the PEPO Production Source Category that are Associated with Processes Subject to the PEPO NESHAP*.⁷⁰

e. Fenceline Monitoring

In the EPA's technology review for the PEPO Production source category, the Agency proposed a fenceline monitoring standard requiring owners and operators to monitor for EtO if their affected source uses, produces, stores, or emits EtO and to conduct root cause analysis and corrective action if the affected source exceeds an annual average EtO concentration action level of 0.2 µg/m³. For a detailed discussion of the EPA's findings, see the document titled *Clean Air Act Section 112(d)(6) Technology Review for Fenceline Monitoring Located at Facilities with PEPO Production Processes Subject to the PEPO NESHAP*.⁷¹

2. How did the technology review change for the PEPO Production source category?

Apart from the proposed requirements for continuous process vents and fenceline monitoring, the EPA is finalizing the results of the technology review pursuant to CAA section 112(d)(6) for the PEPO Production

source category as proposed with two minor clarifications related to the heat exchange system and storage vessel provisions of the review. For continuous process vent requirements, the final rule retains the use of the TRE index value concept and the current definition of a "Group 1 continuous process vent."⁷² This definition refers to a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product and that has: (1) a flow rate greater than or equal to 0.005 scmm, (2) a total organic HAP concentration greater than or equal to 50 ppmv, and (3) a TRE index value less than or equal to 1.0. Additionally, the final rule excludes all elements of the proposed fenceline monitoring requirements. With regard to the heat exchange system portion of the EPA's proposed technology review, the EPA is clarifying that the PEPO NESHAP does not require owners and operators to monitor their regulated heat exchange systems using water sampling methods or a surrogate indicator (i.e., comply with the provisions in either 40 CFR 63.104(b) or (c)) if the heat exchange system is monitored for leaks using the Modified El Paso Method (according to 40 CFR 63.104(g)). For the storage vessel portion of the EPA's proposed technology review, the Agency is allowing more time (i.e., either the next time the storage vessel is emptied and degassed, or no later than March 18, 2036) for owners and operators to install upgraded deck fittings and controls for guidepoles for all storage vessels equipped with an IFR. For more details regarding these changes to the EPA's technology review, see section IV.B.3 of this preamble.

Additionally, in this final action, the EPA has reevaluated control options under the authority of CAA section 112(d)(6) for process vents, storage vessels, equipment, heat exchange systems, and wastewater that emit EtO.

⁷² The TRE index value is derived from the cost effectiveness associated with HAP control by a flare or thermal oxidation and is a function of vent stream flowrate, vent stream net heating value, hourly emissions, and a set of coefficients. The TRE index value was first introduced in an EPA document titled *Guideline Series for Control of Volatile Organic Compound (VOC) Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry (SOCMI)* (see EPA-450/3-84-015 (Dec. 1984)). The EPA incorporated the TRE concept into the original HON (see 59 FR 19468 (Apr. 22, 1994)) and the original PEPO NESHAP rulemaking (see 64 FR 29420 (June 1, 1999)). The TRE index value is used in 40 CFR 63, subpart G, and 40 CFR 63, subpart PPP, process vent regulations. The TRE index value can also trigger monitoring, recordkeeping, and reporting requirements. In general, continuous process vents with a TRE index value equal to or less than 1.0 require control.

⁶⁸ Document ID No. EPA-HQ-OAR-2023-0282-0065.

⁶⁹ Document ID No. EPA-HQ-OAR-2023-0282-0070.

⁷⁰ Document ID No. EPA-HQ-OAR-2023-0282-0074.

⁷¹ Document ID No. EPA-HQ-OAR-2023-0282-0056.

As part of this review, the EPA considered relevant comments from the proposed CAA section 112(f)(2) analysis (which the Agency is not finalizing in this action) that could inform or support the Agency's current evaluation under CAA section 112(d)(6).⁷³ Based on this reassessment, the EPA is finalizing requirements for EtO-emitting sources that reflect a higher level of control than those being finalized under CAA section 112(d)(6) for the same types of sources in organic HAP service that do not emit EtO. Section III.B of this preamble describes the specific requirements for EtO emissions that the EPA is finalizing. Section IV.B.3 of this preamble explains the Agency's decision to finalize them under CAA section 112(d)(6).

3. What key comments did we receive that are relevant to the technology review, and what are our responses?

The EPA received comments in support of and against the proposed technology review. The EPA only received minor comments requesting clarifications associated with the Agency's technology review for heat exchange systems, storage vessels, and wastewater in organic HAP service. Commenters argued that the Agency should not revise the leak definition for valves in gas/vapor or light liquid service from 500 to 100 ppmv and should instead re-open and reevaluate the MACT standards for new technologies for equipment leaks. The comments and the EPA's specific responses to these issues are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking. Based on these comments, the EPA is finalizing revisions (along with the minor clarifications described in section IV.B.2 of this preamble) to require the Modified El Paso Method for heat exchange systems, and the EPA is finalizing revisions to the Group 1 PEPO storage vessel capacity and MTVP thresholds and a requirement for owners and operators to upgrade deck fittings and controls for guidepoles for all storage vessels equipped with an IFR. For equipment leaks, the EPA is finalizing, as proposed, a leak definition for valves in gas/vapor or light liquid service of 100 ppm. The EPA is finalizing the Agency's proposed determination that there are currently

no cost-effective developments for the organic HAP standards for wastewater.

For continuous process vents in organic HAP service, the EPA received numerous comments opposing the EPA's proposal under the technology review to abandon the TRE index value concept in favor of a 1.0 lb/hr mass-limit threshold. The EPA also received several comments regarding the fenceline monitoring requirements that the Agency proposed under the technology review. This section provides summaries of and responses to the key comments received regarding: (1) the technology review amendments proposed for continuous process vents at existing and new affected sources associated with nonepoxide organic HAP (from making or modifying product) and process vents associated with existing and new affected sources that produce PEPO using THF and (2) the proposed fenceline monitoring requirements. Comment summaries and the EPA's responses for additional issues raised regarding the proposed requirements resulting from the technology review for the PEPO source category are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

In addition, as stated previously in this preamble, several commenters requested that the EPA consider evaluating EtO-specific standards (for process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in EtO service) under CAA section 112(d)(6) instead of under CAA section 112(f)(2). As such, the EPA has considered comments on the amendments proposed under CAA section 112(f)(2) that inform or support the Agency's current CAA section 112(d)(6) analysis. This section summarizes and responds to these comments, presenting the outcomes and decisions from the EPA's technology review of process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in the PEPO Production source category that emit EtO.

a. Continuous Process Vents in Organic HAP Service

Comment: Commenters strongly opposed the EPA's proposal to abandon a longstanding compliance option in the PEPO NESHAP (*i.e.*, the TRE index value concept) for continuous process vents in organic HAP service in favor of a 1.0 lb/hr mass-limit threshold.

Commenters provided many reasons for their opposition.

Commenters argued that removing the TRE index value concept from the PEPO NESHAP falls outside the Agency's technology review authority, since no significant control technology advancements had emerged since the 2014 PEPO NESHAP review to warrant eliminating the compliance mechanism.⁷⁴ These commenters pointed out that the EPA had already previously acknowledged that multiple process vents can be routed to a single APCD and old information is not a new development. The commenters also argued that neither a facility's voluntary control of its Group 2 process vents nor enforcement challenges justify eliminating the TRE index value concept from the PEPO NESHAP.

Commenters claimed that the EPA's comparison of proposing to remove the TRE index value concept from the PEPO NESHAP to other NESHAP that omit the TRE index value concept was flawed from the outset. Commenters pointed out that during the Ethylene Production rulemaking, the EPA itself noted "relatively few process vents," making any Group 1 versus Group 2 distinction largely moot. They also emphasized that the EPA did not eliminate the TRE index value concept in its recent MON technology review, and the generic MACT standards under 40 CFR 63, subpart YY, continue to require TRE index value calculations for categories with multiple vent types, underscoring the TRE index value's ongoing regulatory relevance. Commenters also noted that while the HON recently removed the TRE index value, industry objected to the TRE index value's removal, in the form of comments and petitions, some of which are still outstanding. In addition, commenters stated that many facilities will still be required to comply with TRE-based determinations according to their title V operating permits and requirements under New Source Performance Standards 40 CFR 60, subparts NNN and RRR.

Commenters also contended that the EPA had leaned too heavily on one facility's CAA section 114 response (regarding the use of process simulations) to paint the TRE index value concept as unduly complex. The commenters asserted that many plants actually rely on direct source testing to generate inputs for calculating the TRE index value; this approach is not complex and avoids process simulation uncertainty altogether. Commenters emphasized that the EPA had provided

⁷³ In the proposal, the EPA proposed stringent EtO-specific standards under CAA section 112(f)(2) and thus did not consider any additional standards necessary under CAA section 112(d)(6).

⁷⁴ 79 FR 17340 (Mar. 27, 2014).

no examples of cases in which verifying TRE index value calculations was challenging or thwarted accurate cost-effectiveness determinations, and commenters pointed out that both state and Federal programs routinely mandate intricate mathematical formulas without issue.

Additionally, regarding the EPA's determination that some facilities are voluntarily controlling continuous process vents that are not required by the NESHAP, commenters highlighted that controlling Group 2 vents is often anything but voluntary. Commenters asserted that facilities control these types of emission streams to satisfy state or Federal regulations, preconstruction permit conditions (such as dispersion modeling or boilerplate requirements), Best Available Control Technology or Lowest Achievable Emission Rate reviews, safety protocols, or internal corporate standards. Commenters emphasized the comprehensive usefulness of the TRE index value, explaining that it accounts for both volumetric flow and net heating value to help identify and prioritize the most significant emission sources. Commenters referenced the 1994 HON preamble, in which the EPA supported the TRE index value concept as an effective method for capturing all relevant factors that influence emission rates.⁷⁵

Commenters also argued that requiring owners and operators to route low-emission, low-heating-value Group 2 streams to an emission control device would produce negligible HAP reductions but would generate carbon monoxide (CO), nitrogen oxides (NO_x), and carbon dioxide (CO₂) and require significant supplemental fuel.

Finally, commenters noted that although the EPA recognized that the cost effectiveness of replacing the TRE index value with a 1.0 lb/hr mass-limit threshold is nearly the same as raising the TRE index value threshold to 5.0 (corresponding to proposed Control Options 1 and 3), the rationale behind selecting Control Option 3 was flawed for the reasons previously outlined. Consequently, commenters urged the EPA not to eliminate the TRE index value concept altogether. Also, some commenters argued that the EPA has the authority to raise the TRE index value threshold to a value that represents cost-effective control for PEPO vents; however, they argued, the EPA's impacts analysis for raising the threshold to a TRE index value of 5.0 overstated emissions reductions and underestimated costs. Other

commenters suggested that the TRE index value threshold should remain at 1.0.

Response: After careful consideration of commenter feedback and technical analysis, the EPA is not finalizing the Agency's proposal to eliminate the TRE index value concept in the PEPO NESHAP for continuous process vents associated with nonepoxide organic HAP from making or modifying product and process vents associated with affected sources that produce PEPO using THF, and the EPA is not removing the 50 ppmv concentration and 0.005 scmm flow rate thresholds that define a "Group 1 continuous process vent." As a result, the EPA also is not adopting the proposed redefinition of a "Group 1 continuous process vent" as any vent emitting greater than or equal to 1.0 lb/hr of total organic HAP. Instead, the final rule retains the TRE index value concept as well as the current definition of a "Group 1 continuous process vent" as a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product and that has: (1) a flow rate greater than or equal to 0.005 scmm, (2) a total organic HAP concentration greater than or equal to 50 ppmv, and (3) a TRE index value less than or equal to 1.0.

In the EPA's proposal to evaluate the potential impacts of eliminating the TRE index value concept from the PEPO NESHAP (as well as the Agency's proposed evaluation of impacts for retaining the TRE index value concept and the 50 ppmv and 0.005 scmm Group 1 process vent thresholds but increasing the TRE index value threshold from 1.0 to 5.0), the EPA relied on data from approximately 50 continuous process vents designated as Group 2, submitted by nine of the 13 HON facilities that responded to the Agency's CAA section 114 information request. At the time, the EPA believed that this dataset served as a reasonable proxy, given the structural and operational similarities between PMPU continuous process vents regulated under the PEPO NESHAP and continuous process vents regulated under the HON. Upon further review and in light of public comments, the EPA now has determined that it is not appropriate to extrapolate impacts for PEPO continuous process vents based on HON data (e.g., for evaluating the elimination of the TRE index value concept in the PEPO NESHAP or for evaluating a change to the TRE index value threshold in the PEPO NESHAP). In other words, the EPA has determined that the Agency's dataset is too limited to finalize this change. While the two

source categories share certain characteristics, there are important distinctions in process design, emission profiles, and control strategies that limit the applicability of HON data to PEPO operations. For example, HON sources tend to operate under more uniform continuous processing conditions (which is what the TRE index value applies to), whereas PEPO Production sources mostly operate in batch processing conditions (and thus most PEPO process vents would not be subject to the continuous process vent standards) and exhibit greater variability in vent characteristics due to differences in product formulations and raw material usage. Although processes using THF to produce PEPO are generally continuous, the EPA is not aware of any facilities currently using THF. Moreover, facilities collected the HON Group 2 process vent data under a specific regulatory context, and that data may not reflect the full range of operating conditions or emission behaviors present in PMPUs. Using this data to model the effects of removing or changing the TRE index value with regard to the PEPO NESHAP could result in misleading conclusions, potentially underestimating or overestimating the environmental and compliance impacts for affected PEPO sources. Given these uncertainties and the lack of PEPO-specific data for continuous vents to support a robust analysis, the EPA has concluded that it would be unreasonable to finalize the proposed changes for continuous vents and revising the TRE index value for PEPO Production sources based on HON-derived information.

b. Fenceline Monitoring

Comment: Commenters supported and opposed the proposed fenceline monitoring requirements for PEPO facilities that use, produce, store, or emit EtO. Commenters in support of fenceline monitoring stated that fenceline monitoring is a development and key practice in the detection and reduction of hard-to-characterize sources of emissions. These commenters also emphasized that they have repeatedly advocated for the application of fenceline monitoring to reduce emissions that impact surrounding communities. Many commenters opposed the use of fenceline monitoring and argued that fenceline monitoring was not a development in practice, process, or control technology and that the EPA exceeded its authority under CAA section 112(d)(6). Commenters argued that LDAR provisions already regulate fugitive emissions, the EPA did not show emissions reductions due to

⁷⁵ 59 FR 19127 (Apr. 22, 1994).

fenceline monitoring in the proposal, and CAA section 112(d)(6) does not authorize the EPA to impose standards to reduce uncertainty in emissions estimates. A commenter also expressed concern with the excessive annual cost of conducting canister sampling of EtO.

Response: In response to public comments and further evaluation, the EPA is not finalizing a fenceline monitoring program for the PEPO Production source category at this time. The EPA disagrees with commenters' assertion that CAA section 112(d)(6) does not authorize the proposed fenceline monitoring work practice standard. However, many commenters raised concerns about the uncertainties and implementation challenges associated with applying fenceline monitoring requirements to PEPO facilities. These concerns suggest that the EPA needs to conduct further analysis before establishing such standards, and the EPA is deferring action until the Agency better understands those issues.

Historically, the EPA has elected to not implement fenceline monitoring for other chemical sector source categories when fugitive emission standards were sufficiently stringent or when the EPA expected other finalized provisions to enhance control or oversight of those emissions.⁷⁶ In the proposal, the EPA acknowledged discrepancies between expected and measured EtO concentrations, based on fenceline monitoring conducted for the Agency's 2022 CAA section 114 request. While the results of this monitoring initially suggested a need for further scrutiny of fugitive emissions, the EPA recognizes that this data was limited to a short period of time at eight PEPO facilities, including only two facilities that did not also have HON sources emitting EtO, and thus might not be representative of their annual emissions, especially considering the episodic nature of batch process emissions associated with PEPO facilities. In this action, the EPA is also finalizing strengthened EtO standards, as outlined in sections IV.B.3.c through IV.B.3.f of this preamble. These updates include improved controls for fugitive emissions from various emission sources such as equipment leaks, storage vessels, wastewater, and heat exchange systems. The EPA expects these enhancements to substantially

reduce fugitive emissions of EtO (and other commingled HAP) from PEPO facilities. In light of these changes, the Agency has determined that it needs further data to assess the overall impact of the revised standards on fugitive emissions across the source category. The EPA notes that the Agency retains the authority under CAA section 112(d)(6) to reevaluate the necessity for fenceline monitoring and associated work practices, once the Agency better understands the impacts of the revised standards.

Finally, the EPA agrees with commenters that the projected annual cost of a fenceline monitoring program for PEPO facilities (nearly \$4.5 million) is not justified without a clearer understanding of the benefits such monitoring would provide. The Agency remains committed to ensuring effective and efficient regulation and will continue to assess the appropriateness of fenceline monitoring as new data become available.

Since the Agency is not finalizing a fenceline monitoring program for the PEPO Production source category, the EPA is not responding to comments related to the details of the proposed fenceline monitoring program. However, summaries of all these comments are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

c. Process Vents and Storage Vessels in EtO Service

Comment: As previously mentioned in this preamble, several commenters requested that the EPA consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of under CAA section 112(f)(2). Commenters broadly urged the EPA to prioritize meaningful reductions in EtO emissions while avoiding excessive compliance costs. More specifically, they called on the EPA to reassess the proposed 1 ppmv threshold used to define "in ethylene oxide service" for process vents emitting EtO, as well as to reassess the proposed 0.1 weight percent threshold applied to storage vessels emitting EtO. One commenter recommended that the EPA allow owners and operators to determine whether a storage vessel qualifies as "in ethylene oxide service" based on its annual average EtO concentration, consistent with the approach used for equipment leaks that emit EtO. A commenter also proposed expanding the alternative method outlined in 40 CFR 63.109(b)(2) (which allows calculation

of EtO concentration when fluid-specific data is available) to include good engineering judgment and process knowledge. Additionally, the commenter requested that owners and operators be permitted to revise a storage vessel's EtO service status by documenting changes in process or raw materials that eliminate EtO service conditions.

Response: The EPA is not finalizing standards under CAA section 112(f)(2) as part of this rulemaking. For more information on this decision, see section IV.A.4 of this preamble. Instead, as requested by commenters, the EPA has reevaluated control options for process vents and storage vessels in EtO service under CAA section 112(d)(6), which requires the EPA to take into account any "developments in practices, processes, or control technologies" and to consider factors such as cost.⁷⁷

Under this framework, the EPA reassessed the proposed EtO-specific standard for process vents and storage vessels. For process vents, the EPA proposed to define "in ethylene oxide service" as any vent within a process that, when uncontrolled, contains a concentration of undiluted EtO at or above 1 ppmv, and when combined, the sum of all these process vents within the process would emit uncontrolled EtO emissions greater than or equal to 5 lb/yr, or 2.27 kg/yr. The EPA proposed that facilities could achieve compliance for process vents "in ethylene oxide service" by reducing EtO emissions by 99.9 percent by weight, controlling the EtO concentration to below 1 ppmv, routing emissions to a flare, or ensuring that total EtO emissions from all vents in the process fall below the 5 lb/yr threshold. For storage vessels, the EPA proposed to define "in ethylene oxide service" for storage vessels to mean that the concentration of EtO in the stored liquid is at least 0.1 percent by weight. The EPA proposed that facilities could achieve compliance for storage vessels "in ethylene oxide service" by reducing EtO emissions by 99.9 percent by weight, controlling the EtO concentration to below 1 ppmv, or routing emissions to a flare.

The EPA considers these compliance options for process vents and storage vessels to represent Control Option 1 under CAA section 112(d)(6), and the Agency finds Control Option 1 feasible for PEPO sources. Commenters indicated that achieving 99.9 percent destruction efficiency is possible using the ECO control technique, and the EPA

⁷⁶ See U.S. EPA, Summary of Public Comments and Responses for the Risk and Technology Review for Ethylene Production, Document ID No. EPA-HQ-OAR-2017-0357-0074 (Mar. 2020); U.S. EPA, Summary of Public Comments and Responses for the Risk and Technology Review for Miscellaneous Organic Chemical Manufacturing, Document ID No. EPA-HQ-OAR-2018-0746-0200 (May 2020).

⁷⁷ See section III.C of the proposal preamble for information on how the Agency conducts technology reviews.

is aware of multiple chemical facilities, including PEPO facilities, already achieving 99.9 percent control efficiency using a thermal oxidizer or other method. For decades, chemical facilities have used flares to control HAP emissions and to handle emissions from a wide variety of emission sources. Because achieving 99.9 percent destruction efficiency can result in very low EtO emissions that are not measurable, thus making the percent destruction efficiency difficult or impossible to quantify, this option includes an alternative 1 ppm standard to demonstrate compliance. Reducing EtO in the streams to 1 ppmv represents the lower end of measurable emissions. However, the EPA understands that changing the process vent definition (to include any gaseous streams “in ethylene oxide service”) will require control of vents that currently are not routed to controls before release to the atmosphere. Retrofitting some of these vents could be difficult, requiring installation of different piping and additional equipment such as gas movers to successfully route low-flow or intermittent streams. While commenters recommended looking at changing the proposed concentration threshold for process vents “in ethylene oxide service,” the EPA finds that concentrations can vary and may not correlate well with overall emissions from the vent stream. From stack testing information submitted in response to the EPA’s CAA section 114 request, the Agency identified two vacuum jet process vents at one unit that have intermittent flows of less than 25 minutes per batch. Assuming batches are completed every 10 hours, the EPA

estimated that these process vents emit 48 lb/yr combined. The EPA additionally assumed that two additional process vents in the PMPU would also be low-flow or intermittent streams, *e.g.*, from certain surge control vessels. Therefore, to avoid technical and implementation challenges associated with capturing very small amounts of EtO emissions from process vents, the EPA identified a second control option, which mirrors the proposed option except that it raises the threshold of “in ethylene oxide service” from 5 lb/yr to 100 lb/yr of combined uncontrolled EtO emissions, and it changes the control option from 5 lb/yr to 100 lb/yr of combined controlled and uncontrolled EtO emissions. Similarly, for storage vessels, the EPA understands that there could be storage vessels storing PEPO products with low levels of unreacted EtO, so Control Option 2 also raises the percent by weight threshold in the definition of “in ethylene oxide service” from 0.1 percent by weight to 1 percent by weight to address this concern.

To assess the impacts of the two control options, the EPA updated the Agency’s proposal analysis. The EPA relied on data from the 2017 National Emissions Inventory (NEI) and identified 11 PEPO facilities with processes that emit EtO from process vents and/or storage vessels. In addition to the NEI, the EPA incorporated information from several other sources, including stack test results submitted in response to the Agency’s CAA section 114 request, full questionnaire responses from each facility, and relevant air permits. The EPA acknowledges that a commenter

recommended applying the percent-by-weight threshold on an annual average basis. However, because the commenter provided no rationale or supporting explanation, the EPA did not include this suggestion in the Agency’s analysis. Additionally, the EPA notes that demonstrating compliance with an annual average would likely require continuous sampling of materials, which could impose significant operational and resource burdens on facilities.

Based on this comprehensive dataset, the EPA estimated that Control Option 1 would affect nine PEPO facilities, while Control Option 2 would impact seven PEPO facilities. For each of these facilities, the EPA calculated the cost of installing a new recuperative thermal oxidizer with 70 percent energy recovery, using the methodology outlined in the EPA Control Cost Manual.⁷⁸ The EPA used a total capital investment estimate of \$1,000,000, a value that commenters provided during the HON rulemaking.⁷⁹ For the final rule, the EPA’s impact analysis was revised to reflect 2024 dollars and an interest rate of 7.5 percent over a 20-year period in the capital recovery factor for thermal oxidizers. See the document titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking, for details on the assumptions and methodologies used in this analysis.

Table 2 of this preamble presents the nationwide impacts for the two control options considered for the final rule for process vents and storage vessels in EtO service.

TABLE 2—NATIONWIDE EMISSIONS REDUCTIONS AND COST IMPACTS OF CONTROL OPTIONS CONSIDERED FOR PROCESS VENTS AND STORAGE VESSELS IN ETO SERVICE AT PEPO FACILITIES

Control option	Total capital investment (\$)	Total annualized costs (\$/yr)	EtO emission reductions (tpy)	EtO cost effectiveness (\$/ton)
1	7,056,000	2,700,000	10.8	250,000
2	5,040,000	1,957,000	10.4	188,200

The EPA finds that Control Option 2 offers meaningful EtO emissions reductions (*i.e.*, over 95 percent of EtO emission reductions projected for Control Option 1 would still be achieved) at a more reasonable cost than Control Option 1 and addresses commenters’ concerns with technical implementation challenges. Importantly, Control Option 2 targets

the larger sources of EtO emissions. Although the EPA’s cost estimates conservatively assume that many facilities would need to install a new thermal oxidizer, the added flexibilities in Control Option 2 may reduce that number, further reducing the compliance burden. By aligning the storage vessel applicability threshold with that finalized for equipment leaks

(*i.e.*, a 1.0 weight percent EtO concentration or greater; see section IV.B.3.d of this preamble), this approach simplifies compliance and the determination of whether storage vessels and associated equipment fall within the scope of “in ethylene oxide service.” Additionally, the cost effectiveness of Control Option 2 is within the range of values associated

⁷⁸ U.S. EPA, 2002. EPA Control Cost Manual (6th ed. Jan. 2002) (EPA/452/B-02-001).
⁷⁹ See 89 FR 42932 (May 16, 2024).

with finalized regulatory options in recent rulemakings regulating EtO emissions, such as the commercial sterilizers NESHAP.⁸⁰ We also note that the cost-effectiveness of Control Option 2 is within the range of historically accepted cost-effectiveness values for highly toxic HAP (such as hexavalent chromium).⁸¹ Therefore, the EPA is finalizing, pursuant to CAA section 112(d)(6), at 40 CFR 63.1423(b) the term “in ethylene oxide service” for process vents to mean each process vent in a process that, when uncontrolled, contains a concentration of greater than or equal to 1 ppmv undiluted EtO, and when combined, the sum of all these process vents within the process would emit uncontrolled EtO emissions greater than or equal to 100 lb/yr (45.4 kg/yr). The EPA also is updating the definition of “process vent” in the final rule at 40 CFR 63.1423(b) to align with this change. The EPA also is finalizing in the PEPO NESHAP at 40 CFR 63.1423(b) the term “in ethylene oxide service” for storage vessels to mean that the concentration of EtO in the stored liquid is greater than or equal to 1.0 percent by weight. The EPA also is finalizing, as proposed, that the exemption for “vessels and equipment storing and/or handling material that contains no organic HAP, or organic HAP as impurities only” listed in the definition of “storage vessel” at 40 CFR 63.1423(b) does not apply for storage vessels in EtO service.

In addition, the EPA is finalizing, as proposed, the procedures for determining whether process vents and/or storage vessels in EtO service meet the definition of the term “in ethylene oxide service,” by reference to 40 CFR 63.109 for PEPO process vents and storage vessels in EtO service. The EPA is finalizing at 40 CFR 63.1425(g) a requirement that PEPO process vents in EtO service reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by at least 99.9 percent by weight, to a concentration less than 1 ppmv for each process vent, or to less than 100 lb/yr for all combined process vents within the process, or (2) routing emissions through a closed vent system to a flare meeting the flare operating requirements

at 40 CFR 63.1436 that the EPA is finalizing as proposed and as discussed in section IV.C of this preamble. At 40 CFR 63.1432(s)—by reference to the HON (*i.e.*, 40 CFR 63.138(b)(3) and (c)(3)) and accounting for differences between the HON and the PEPO NESHAP—the EPA is finalizing that PEPO storage vessels in EtO service reduce emissions of EtO by either: (1) venting emissions through a closed vent system to a non-flare control device that reduces EtO by at least 99.9 percent by weight or to a concentration less than 1 ppmv for each storage tank vent, or (2) venting emissions through a closed vent system to a flare meeting the flare operating requirements at 40 CFR 63.1436 that the EPA is finalizing, as proposed, and discussed in section IV.C of this preamble. The EPA is also finalizing procedures to determine compliance with these EtO standards at 40 CFR 63.1426(g) (by reference to 40 CFR 63.124 for PEPO process vents in EtO service and accounting for differences between the HON and the PEPO NESHAP) and 40 CFR 63.1432(s)(3) (by reference to 40 CFR 63.124 for PEPO storage vessels in EtO service and accounting for differences between the HON and the PEPO NESHAP).

Notably, the EPA disagrees with the commenters’ requests to allow for good engineering judgment and process knowledge in 40 CFR 63.109(b)(2) to determine whether a storage vessel qualifies as “in ethylene oxide service” or to allow documentation of changes to the process or raw materials to revise the determination. The final definition of “in ethylene oxide service” lets an owner or operator designate emission points based on process knowledge; however, if an owner or operator wants to say an emission point is not in EtO service, they must use the procedures in 40 CFR 63.109. The EPA is allowing good engineering judgment at 40 CFR 63.109(c)(2) (for equipment leaks) and (e) (for heat exchange systems) due to the difficulty and issues with sampling and testing fluid in process lines, particularly if the fluid contains EtO. Additionally, the rule already explicitly allows an owner or operator to calculate the concentration of EtO of the fluid stored in the storage vessels if information specific to the fluid stored, including data based on safety data sheets, is available.

Comment: Some commenters opposed the EPA’s proposal at 40 CFR 63.1427(a) that owners and operators may not use the ECO pollution prevention technique to show compliance with the proposed standard for PEPO process vents in EtO service. Commenters stated that they

routinely use the ECO option to reduce epoxide emissions and that the ECO option provides an efficient and cost-effective means to control epoxide emissions without secondary emissions or the additional energy consumption of a traditional control device.

A commenter stated that regulated entities should have the flexibility to perform ECO or to shorten the batch cycle and install emission control equipment as both options reduce EtO emissions. The commenter disagreed with the EPA’s justification that achieving a 99.9 percent reduction of EtO from an onset of 1 ppmv is not practical using ECO and said that the proposed provision does not require a 99.9 percent reduction of EtO from a 1 ppmv onset. Instead, the commenter expressed that, in order to meet the treatment target for a process vent in EtO service, ECO would only need to achieve either a 99.9 percent reduction of EtO emissions or a concentration of 1 ppmv of EtO in the process vent. Additionally, the commenter argued that the EPA did not support the statement that the use of ECO could lead to high EtO emissions relative to the starting amount of epoxide used.

To support their argument, the commenter provided information on emissions reductions as a result of using ECO as an emissions control technique. The information showed that for two products, ECO can achieve 99.9 percent reductions in EtO emissions based on the commenter’s analysis. In addition, the commenter submitted a more detailed economic analysis as confidential business information to show when ECO is no longer economically feasible.

A different commenter acknowledged that while the economic breakpoint may have changed since the EPA originally promulgated the procedures to determine the onset, they disagree with the EPA’s assertion that ECO is no longer economically viable and noted the conclusion was drawn from a single response to the EPA’s CAA section 114 request. The commenter requested a discussion with the EPA on ways to revise the onset determination in 40 CFR 63.1427(c) while retaining the necessary emissions reductions and economic viability of the ECO option.

Another commenter said that the EPA did not provide adequate explanation to support elimination of the ECO option. They said that facilities should have the option to determine on their own whether use of ECO is economically viable. Additionally, the commenter noted that their facility only uses the ECO option while venting to a control device so that EtO emissions are

⁸⁰ In 2024, the EPA finalized multiple EtO emissions standards under CAA section 112(d)(6) for commercial sterilization facilities that had cost-effectiveness estimates of approximately \$2,000,000 per ton of EtO (*see* 89 FR 24090 (Apr. 5, 2024)).

⁸¹ For small hard chromium electroplating, the EPA finalized a requirement with a cost effectiveness of \$15,000 per pound (\$30,000,000 per ton) to provide an ample margin of safety (*see* 77 FR 58227–28 and 58239 (Sept. 19, 2012)).

controlled to required limits regardless of the starting amount of epoxide used.

Response: The EPA has reevaluated the use of ECO as a control technique to comply with EtO process vent standards. Although customer specifications for PEPO products increase the economic incentive to continue the reaction until less than 1 ppm EtO remains in the product, post-reaction steps could remove the EtO. Therefore, the traditional determination of economic breakpoint (*i.e.*, comparing the cost of the unreacted EtO to the cost of the reduced productivity of the reactor) is still relevant. The EPA would need more information to update the appropriate starting point of ECO under current economic conditions. Thus, given these uncertainties, the EPA is not finalizing the proposed elimination of ECO as a compliance option for the EtO process vent standards at this time.

d. Equipment Leaks in EtO Service

Comment: As previously mentioned in this preamble, several commenters requested that the EPA consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of under CAA section 112(f)(2). For equipment that emits EtO, to minimize burden, commenters specifically requested that the EPA reduce the proposed monthly connector monitoring frequency and revise the proposed 0.1 weight percent EtO concentration threshold in the definition of equipment “in ethylene oxide service.” Commenters indicated that there are significant logistical challenges to monitor all connectors monthly due to the large number of connectors that require monitoring. Commenters stated that gasket failure is the primary reason for connector leaks and, once repaired, connectors have a low frequency of repeat leaks. In addition, the commenters emphasized that monitoring connectors monthly would be particularly difficult if a facility is shut down for a portion of the month, as all connectors would need to be monitored within a 15-day period. Commenters recommended quarterly connector monitoring and encouraged the EPA to consider annual or semiannual connector monitoring frequencies. Commenters also stated that the EPA did not provide a reasonable justification to define equipment “in ethylene oxide service” at such a low concentration (*i.e.*, 0.1 weight percent EtO) and recommended that the EPA use a higher concentration threshold.

Response: The EPA is not finalizing standards under CAA section 112(f)(2) as part of this rulemaking. For more information on this decision, see section

IV.A.4 of this preamble. Instead, as requested by commenters, the EPA has reevaluated control options for equipment leaks in EtO service under CAA section 112(d)(6), which requires the EPA to take into account any “developments in practices, processes, or control technologies” and to consider factors such as cost.

Under this framework, to assess what standards may be appropriate for equipment that leak EtO, the EPA considered previously reviewed information for existing LDAR programs for the chemical manufacturing industry discussed in the proposal and assessed the comments received during the public comment period. As part of that review, the EPA noted that two rules require control of leak emissions from equipment “in ethylene oxide service.” In the HON and MON rulemakings, the EPA added EtO-specific requirements for equipment in EtO service. These rules’ requirements for equipment “in ethylene oxide service” are more stringent than for equipment in organic HAP service.⁸² Other regulations, permits, and voluntary initiatives have similarly structured LDAR programs (*i.e.*, with a defined monitoring frequency and leak definition) for a variety of chemical manufacturing facilities. For example, some chemical manufacturing area source facilities perform monthly or quarterly monitoring for EtO at leak definitions of 50 ppmv or 100 ppmv.⁸³

Given the EtO-specific requirements in the HON and MON, the similarities in controlling equipment leak emissions across chemical manufacturing facilities, and the issues and recommendations provided by commenters (*i.e.*, commenters expressed that monthly monitoring was especially burdensome for connectors and recommended a reduced frequency, while also urging the EPA to target equipment with higher potential EtO emissions by raising the EtO concentration threshold for the LDAR program), the EPA evaluated six control options under CAA section 112(d)(6) for PEPO equipment that emit EtO for the final rule. The first option is the same control option the EPA proposed for the PEPO NESHAP under CAA section 112(f)(2), which reflects the same EtO

standard for equipment in EtO service subject to the HON. The first option defines equipment “in ethylene oxide service” as containing or contacting a fluid (liquid or gas) that contains at least 0.1 percent by weight EtO. Owners or operators achieve compliance for equipment “in ethylene oxide service” by performing monthly monitoring at a leak definition of 100 ppmv for gas/vapor and light liquid connectors and gas/vapor and light liquid valves and at a leak definition of 500 ppmv for light liquid pumps. The other five control options involve the impact of changing the EtO concentration threshold from 0.1 to 1 percent by weight EtO and changing the monitoring frequencies for connectors (from monthly to quarterly, semiannual, and annual) and for valves (from monthly to quarterly). The light liquid pump monitoring frequencies and leak definitions are the same for all the control options the EPA evaluated. Connectors account for almost 70 percent of all components at a PEPO PMPU; any reduction in their required monitoring frequency would substantially lower the time commitment and costs needed for PEPO facilities to comply with an LDAR standard for equipment leaks that emit EtO emissions.

The six EtO equipment leak control options the EPA evaluated for the final rule are:

- *Control Option 1:* 0.1 percent by weight EtO concentration threshold: monthly monitoring at 100 ppmv for gas/vapor and light liquid connectors and gas/vapor and light liquid valves, monthly monitoring at 500 ppmv for light liquid pumps (the proposed option);

- *Control Option 2:* 1 percent by weight EtO concentration threshold: monthly monitoring at 100 ppmv for gas/vapor and light liquid connectors and gas/vapor and light liquid valves, monthly monitoring at 500 ppmv for light liquid pumps;

- *Control Option 3:* 1 percent by weight EtO concentration threshold: quarterly monitoring at 100 ppmv for gas/vapor and light liquid connectors, monthly monitoring at 100 ppmv for gas/vapor and light liquid valves, monthly monitoring at 500 ppmv for light liquid pumps;

- *Control Option 4:* 1 percent by weight EtO concentration threshold: quarterly monitoring at 100 ppmv for gas/vapor and light liquid connectors and gas/vapor and light liquid valves, monthly monitoring at 500 ppmv for light liquid pumps;

- *Control Option 5:* 1 percent by weight EtO concentration threshold: semiannual monitoring at 100 ppmv for

⁸² 89 FR 42932 (May 16, 2024); 85 FR 49084 (Aug. 12, 2020).

⁸³ Chemical manufacturing area source facility LDAR program details are available in U.S. EPA, *Clean Air Act Section 112(d)(5) GACT Standard Analysis for Equipment Leaks that Emit Ethylene Oxide and Section 112(d)(6) Technology Review for Equipment Leaks from Chemical Manufacturing Process Units at Area Sources Subject to the CMAS NESHAP*, Document ID No. EPA-HQ-OAR-2024-0303-0027, appendix B.

gas/vapor and light liquid connectors, quarterly monitoring at 100 ppmv for gas/vapor and light liquid valves, monthly monitoring at 500 ppmv for light liquid pumps; and

- *Control Option 6*: 1 percent by weight EtO concentration threshold: maintain monitoring frequencies from the current PEPO requirements for non-EtO equipment, 100 ppmv leak definition for gas/vapor and light liquid connectors and gas/vapor and light liquid valves, 500 ppmv leak definition for light liquid pumps.

To assess the impacts of these control options, the EPA relied on data received pursuant to the Agency's CAA section 114 request. The EPA first assessed the impact of increasing the EtO threshold from 0.1 to 1 percent by weight EtO. The EPA does not have sufficient data to fully define the population of equipment between 0.1 and 1 percent by

weight EtO (*i.e.*, EtO concentration data are not available for individual pieces of equipment). However, the EPA approximated this impact based on PEPO PMPU-level EtO concentration data. While a PMPU likely would have a combination of equipment that is above and below a 1 percent by weight EtO threshold, the responses to the EPA's CAA section 114 request only provided data to make this determination at the PEPO PMPU-level. The EPA determined that two PEPO PMPUs have an average EtO concentration less than 1 percent by weight EtO and excluded these PMPUs entirely from the Agency's analyses when assessing the control options that used a threshold of 1 percent by weight EtO (*i.e.*, Control Options 2 through 6). The EPA otherwise applied the same methodology to estimate the costs and

emissions reduction for the final rule as applied for the proposal. For the final rule, the EPA's impact analysis reflects 2024 dollars, and the Agency used an interest rate of 7.5 percent to calculate capital recovery factors. See the document titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking, for details on the assumptions and methodologies the EPA used in this analysis.

Table 3 of this preamble presents the nationwide impacts for the control options considered for the final rule for equipment in EtO service. Table 3 shows the control options ordered from most stringent to least stringent; the incremental cost effectiveness shown for each option is in comparison to the next control option in the table.

TABLE 3—NATIONWIDE EMISSIONS REDUCTIONS AND COST IMPACTS OF CONTROL OPTIONS CONSIDERED FOR EQUIPMENT IN EtO SERVICE AT PEPO FACILITIES

Control option	Total capital investment (\$)	Total annualized costs (\$/yr)	EtO emission reductions (tpy)	EtO cost effectiveness (\$/ton)	Incremental EtO cost effectiveness (\$/ton)
1	\$113,000	\$1,740,000	22.1	\$78,900	\$248,000
2	65,400	1,220,000	20.0	60,900	289,000
3	65,400	497,000	17.5	28,300	53,500
4	65,400	235,000	12.6	18,700	38,700
5	65,400	91,800	8.9	10,300	9,680
6	65,400	16,300	1.1	15,100	

While the cost effectiveness values of all the control options are within the range of values associated with finalized regulatory options in recent rulemakings regulating EtO emissions, such as the commercial sterilizers NESHAP,⁸⁴ and are within the range of historically accepted cost-effectiveness values for highly toxic HAP (such as hexavalent chromium),⁸⁵ the EPA is finalizing Control Option 3 in lieu of the other control options evaluated, including Control Option 1 (the proposed option). The EPA is finalizing Control Option 3 to add an EtO-specific LDAR standard in the PEPO NESHAP for equipment in EtO service pursuant to CAA section 112(d)(6) because this option offers meaningful emissions reductions while significantly reducing compliance burdens (*e.g.*, compared to Control Option 1). As illustrated in Table 3 of this preamble, the EPA projects that Control Options 6, 5, 4, and 3 incrementally achieve increased EtO emissions reductions with steadily

increasing annual costs associated with the increased monitoring frequencies. However, between Control Options 3 and 2 (*i.e.*, increasing connector monitoring frequency from quarterly to monthly), there is a significant jump in the annual cost without a similarly significant improvement to EtO emissions reductions. Additionally, Control Option 3 has annual costs 72 percent lower than Control Option 1, but the emission reductions are only 21 percent lower. Industry stakeholders also have emphasized the importance of targeting substantial sources of EtO emissions without imposing unnecessary logistical challenges that are not fully captured in the overall annual costs. For example, commenters pointed to certain maintenance situations that could limit the time available to conduct monthly connector monitoring to only a week or two—a situation that, while infrequent, the EPA is unable to fully account for in its costs analyses. The EPA also recognizes that emissions reductions benefits result from focusing attention and efforts on the equipment with higher potential for large emissions of EtO (*i.e.*, equipment

prior to the polymerization reaction, which would contain process fluids with higher EtO content).

Therefore, pursuant to CAA section 112(d)(6), the EPA is finalizing at 40 CFR 63.1423(b) the term “in ethylene oxide service” for equipment to mean any equipment that contains or contacts a fluid (liquid or gas) that is at least 1.0 percent by weight EtO. In addition, the EPA is finalizing requirements for quarterly monitoring at a leak definition of 100 ppmv for gas/vapor and light liquid connectors in EtO service, monthly monitoring at a leak definition of 100 ppmv for gas/vapor and light liquid valves in EtO service, and monthly monitoring at a leak definition of 500 ppmv for light liquid pumps in EtO service, at 40 CFR 63.1434(a)(3), by reference to the HON and accounting for the differences between the HON and the PEPO NESHAP.

Comment: Several commenters opposed the EPA's proposal to disallow the use of delay of repair for equipment in EtO service. The commenters said that the EPA's proposed elimination of delay of repair will increase emissions of EtO, increase costs, and eliminate

⁸⁴ See 89 FR 24090 (Apr. 5, 2024).

⁸⁵ See 77 FR 58227–28 and 58239 (Sept. 19, 2012).

needed flexibility for facilities to operate in a continuous manner without frequent shutdowns.

Commenters stated that lead times for shutdowns provide adequate time for facilities to order and test components but if the delay of repair provisions are eliminated for equipment in EtO service, the required lead times will result in extended shutdowns. The commenters asserted that while small EtO leaks may be able to be mitigated by off-the-shelf solutions, these cannot be used in every instance and finding an alternative can take more than the proposed 15-day repair window. One commenter stated that taking a tank out of service is a monumental task that is bound by strict process requirements due to safety concerns. The commenter said that requiring expedited shutdowns would pose serious safety hazards for workers due to the volatile nature of EtO.

Commenters stated that if the EPA's intent is to reduce EtO emissions from PEPO facilities, the Agency should continue to allow delay of repair, at least in situations where delaying repair would result in fewer EtO emissions than shutting down. A commenter also noted that the EPA did not quantify any potential emissions reductions associated with delay of repair. The commenter expressed that if the EPA had accounted for the emissions reductions from elimination of the delay of repair provisions, the analysis would show that more frequent shutdown events would lead to emissions of approximately 5 to 340 pounds of EtO per event. The commenter provided an example where a leak repair would have to be delayed for 10 years before emissions exceeded those of a shutdown event.

A commenter recommended that the EPA consider alternatives if the full delay of repair provisions cannot be retained. The commenter proposed that the EPA allow owners or operators to delay repair for no more than five total components in EtO service and not allow repair delay for any component with a leak greater than or equal to 1,000 ppmv. According to the commenter, their proposed alternative would ensure that a minimal number of components would be on delay of repair status at any one time and that none of those components would have large leaks while providing facilities with flexibility needed to avoid unplanned shutdowns.

Response: For equipment in EtO service, the EPA is finalizing repair of leaks as soon as practicable but no later than 15 days after the leak is detected, with delay of repair allowed in limited

circumstances, at 40 CFR 63.1434(a)(3)(iv). To address commenters' concerns that some equipment in EtO service would be difficult to repair without requiring a process shutdown and disrupting production, the EPA is not finalizing the proposed removal of delay of repair allowances for leaking equipment in EtO service. Instead, the EPA is maintaining the delay of repair requirements for equipment in organic HAP service at 40 CFR 63.171 as well as incorporating suggestions from commenters to create additional enforceable guardrails for equipment in EtO service to limit EtO emissions from leaks. These guardrails include restricting the number of components in EtO service that can be put on delay of repair status at a time, requiring continued monitoring of any equipment in EtO service on delay of repair status, and finalizing a leak action level that, if exceeded during the initial or continued monitoring, would no longer allow the repair to be delayed and would instead require repair consistent with the equipment leak requirements (*i.e.*, repaired no later than 15 calendar days after the leak action level is exceeded).

For PEPO production sources, the EPA believes that the additional guardrails in this action for delaying repair of equipment in EtO service would significantly reduce the need for unscheduled shutdowns and continue to ensure achievement of the projected emission reductions from the revised equipment leak standards for equipment in EtO service. First, based on commenter suggestions, the EPA is limiting the number of components in EtO service in a PMPU that can be put on delay of repair to no more than five components at a time. To accommodate PMPUs with more than 5,000 pieces of equipment in EtO service, where the number of components that could be difficult to repair without a shutdown could increase proportionally, the EPA is alternatively allowing delay of repair of no more than 0.1 percent of the components in EtO service (rounded up to the next highest whole number). Second, the EPA is requiring that PEPO sources conduct monthly monitoring for any piece of equipment in EtO service on delay of repair to ensure the leak remains small. Consistent with comments, the EPA is finalizing a leak action level of 1,000 ppm for equipment in EtO service to ensure that owners or operators will quickly fix larger leaks. Owners or operations would need to repair equipment that they find is leaking at or above the 1,000 ppm action level no later than 15 calendar days after

the leak action level is exceeded. This includes monthly monitoring events for equipment on delay of repair. If a leak grows such that a monthly monitoring event reveals that equipment placed on delay of repair is now leaking above the leak action level, the owner or operator of that piece of equipment can no longer delay repair. Instead, the owner or operator will need to fix the leak no later than 15 calendar days after detection of the leak action level exceedance. Lastly, the EPA is allowing PEPO production sources to delay repair of equipment in EtO service if the owner or operator can isolate the equipment from the process such that the equipment does not remain in EtO service, similar to the requirements in 40 CFR 63.171(b). These isolated pieces of equipment would not count toward the five components or 0.1 percent of components calculation nor be subject to the continued monthly leak monitoring or leak action level, since the equipment would no longer have the potential to emit EtO.

Comment: Some commenters opposed the EPA's proposal to disallow skip periods for monitoring equipment in EtO service. One commenter expressed that removing skip periods increases costs for industry without reductions in emissions. The commenter cited the CAA section 114 data and stated that seven out of nine process units in EtO service for which the EPA had data indicated that there were no leaks detected in 2017, and thus, the Agency cannot justify the elimination of skip periods, given low initial leak rates. With respect to connectors specifically, the commenter claimed that they have a lower leak rate than valves and pumps, and that once repaired, there is a low frequency of repeat leaks. The commenter said that it is a waste of resources to monitor the same connectors every month if the facilities have low leak frequencies.

Another commenter suggested that instead of removing skip periods for gas/vapor and light liquid valves in EtO service, the EPA should use an approach similar to 40 CFR part 60, subparts VV, VVa, and VVb (*i.e.*, monitor monthly for two successive months and then monitor the first month of every subsequent quarter until a leak is detected). The commenter said that this approach would allow their facilities to focus resources on valves with leaks greater than 100 ppmv and not have to continue monitoring all valves on a monthly basis. Alternatively, the commenter recommended that owners and operators be allowed to subdivide valves in gas/vapor or light liquid

service into two or three subgroups where, instead of monitoring all valves the first month of every quarter, each subgroup may be monitored in a different month, so long as each subgroup is monitored every three months.

Response: The EPA is finalizing specific monitoring frequencies consistent with its CAA section 112(d)(6) review and is not allowing skip periods for equipment in EtO service. Leaks are often random by nature, and the EPA has determined that consistent monitoring frequencies are necessary to ensure that the LDAR standard maintains the level of stringency evaluated for the technology review. Additionally, because the EPA is not finalizing fenceline monitoring requirements for EtO in this final rule, it is even more critical to ensure by other means that owners or operators control fugitive emissions to the intended level, and skip periods could lead to prolonged emissions from a random leak that owners or operators did not find due to a lack of monitoring. For connectors, as discussed earlier in this section, the EPA has changed monitoring frequency in the final rule to quarterly instead of monthly, as proposed. This change addresses the biggest challenge indicated by commenters and alleviates concerns about the potential impact of removing skip frequencies and requiring monthly connector monitoring. Considering all these factors and the cost effectiveness of the standard, the EPA is not allowing skip periods for equipment in EtO service.

e. Heat Exchange Systems in EtO Service

Comment: As previously mentioned in this preamble, several commenters requested that the EPA consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of under CAA section 112(f)(2). Commenters declared that the proposed requirements for heat exchange systems that emit EtO were above and beyond what is appropriate and necessary to control EtO emissions. Commenters stated that the EPA's proposal to conduct weekly monitoring using the Modified El Paso Method is an undue, repetitive strain on personnel with little environmental benefit. Instead, commenters recommended that the EPA consider either monthly or quarterly monitoring options. Commenters also urged the EPA to consider setting a concentration threshold for EtO above the proposed 0.1 weight percent when determining which heat exchangers qualify as being "in ethylene oxide service." One

commenter suggested that the current monitoring frequency and concentration threshold for PEPO heat exchangers in organic HAP service (*i.e.*, quarterly monitoring, applicable to heat exchangers that contain a process fluid that is at least 5 weight percent organic HAP) are sufficient to control EtO emissions from heat exchangers.

Response: The EPA is not finalizing standards under CAA section 112(f)(2) as part of this rulemaking. For more information on this decision, see section IV.A.4 of this preamble. Instead, as requested by commenters, the EPA has reevaluated control options for heat exchange systems in EtO service under the CAA section 112(d)(6) authority, which requires the EPA to take into account any "developments in practices, processes, or control technologies" and to consider factors such as cost.

Under this framework, to identify and evaluate standards that may be appropriate for heat exchange systems that emit EtO, the EPA considered previously reviewed information from other rulemakings for the chemical manufacturing industry, assessed the public comments, and considered the new requirements for PEPO heat exchange systems in organic HAP service that the EPA is finalizing in this action. The EPA identified use of the Modified El Paso Method to monitor for heat exchange system leaks multiple times, although the specific requirements vary. The EPA assessed two control options for heat exchange systems that emit EtO. To start, as discussed in sections IV.B.1 and IV.B.2 of this preamble, the EPA proposed and are finalizing that heat exchange systems in organic HAP service must use the Modified El Paso Method.⁸⁶

The EPA first reassessed the same control option the Agency proposed for the PEPO NESHAP under CAA section 112(f)(2). At proposal, the EPA identified one rule requiring control of emissions from heat exchange systems "in ethylene oxide service." In the 2024 HON rulemaking, the EPA added EtO-specific requirements for heat exchange systems in EtO service.⁸⁷ There are minimal operational differences between controlling heat exchange system emissions from HON chemical manufacturing process units (CMPUs) and PEPO PMPUs. As such, Control Option 1 reflects the same control option the EPA proposed for the PEPO NESHAP under CAA section 112(f)(2)

and also reflects the exact same EtO standard for heat exchange systems in EtO service subject to the HON. Control Option 1 defines "in ethylene oxide service" for heat exchange systems as any heat exchange system in a process that cools process fluids (liquid or gas) that are 0.1 percent or greater by weight of EtO. Under Control Option 1, compliance for heat exchange systems "in ethylene oxide service" is achieved by conducting weekly monitoring using the Modified El Paso Method and repairing leaks of total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or greater within 15 days from the sampling date, with no delay of repair allowed.

In response to commenters' concerns that the proposed control requirements for heat exchange systems in EtO service may be unnecessarily stringent (particularly in light of the EPA's acknowledgment that the 2017 NEI contained no reported EtO leaks), the Agency also evaluated an alternative approach, Control Option 2. This option mirrors Control Option 1 in regulating heat exchange systems "in ethylene oxide service" but introduces key distinctions that offer greater flexibility. Most notably, in Control Option 2, the EPA raises the percent by weight threshold in the definition of "in ethylene oxide service" from 0.1 percent by weight to 1 percent by weight and require monthly (instead of weekly) monitoring using the Modified El Paso Method. The EPA recognizes that there are benefits to focusing attention and efforts on heat exchange systems that have a higher potential for large leaks of EtO because they service process fluids with higher EtO content; thus, the EPA evaluated a 1 percent by weight threshold to represent the EtO content expected in process fluids (cooled by the heat exchange system) prior to the polymerization reaction. Control Option 2 also requires repairing leaks of total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or greater within 45 days and allows delay of repair in certain circumstances as it encompasses a delay of repair action level of total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv—a level that, if exceeded during leak monitoring, would require immediate repair (*i.e.*, the leak found cannot be put on delay of repair and would be required to be repaired within 30 days of the monitoring event). Given the absence of data on the prevalence and magnitude of EtO leaks from heat exchange systems in EtO service at

⁸⁶ In organic HAP service means the heat exchanger contains a process fluid that is 5 percent or greater by weight organic HAP.

⁸⁷ 89 FR 42932 (May 16, 2024).

PEPO sources, the EPA agrees with commenters that increasing the frequency of monitoring (e.g., going from monthly monitoring in Control Option 2 to weekly monitoring in Control Option 1) might not yield meaningful emissions reductions and that any additional modeled reductions appear to be minimal. Further, in evaluating Control Option 2, the EPA recognizes that less frequent monitoring could alleviate burdens on LDAR technicians and that providing flexibility to delay repairs may help facilities avoid unnecessary process shutdowns.

To assess the impacts of the two control options, the EPA assumed that the provisions would affect all 20 PEPO facilities with processes that use and emit EtO. As part of the EPA's analysis, the Agency assumed that owners or

operators conducting monitoring for three or more heat exchange systems would elect to purchase a stripping column and flame ionization detector analyzer and perform in-house Modified El Paso Method monitoring, because the total annualized costs for in-house Modified El Paso Method monitoring are less than the costs for contracted services. In addition, the EPA assumed that owners or operators could repair leaks by plugging a specific heat exchanger tube, and if a heat exchanger is leaking to the extent that it needs replacing, then it is effectively at the end of its useful life. Therefore, the EPA determined that the cost of replacing a heat exchanger is an operational cost that the owner or operator would incur as a result of routine maintenance and equipment replacement and not attributable to the control option. For

the final rule, the EPA's impact analysis reflects 2024 dollars. The EPA also used an interest rate of 7.5 percent over a 5-year period in the capital recovery factor for the useful life of a quality assurance plan and/or Modified El Paso Method monitoring system (depending on whether the monitoring is contracted out or performed in-house). See the document titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking, for details on the assumptions and methodologies used in this analysis.

Table 4 of this preamble presents the nationwide impacts for the two control options considered for the final rule for heat exchange systems in EtO service.

TABLE 4—NATIONWIDE EMISSIONS REDUCTIONS AND COST IMPACTS OF CONTROL OPTIONS CONSIDERED FOR HEAT EXCHANGE SYSTEMS IN EtO SERVICE AT PEPO FACILITIES

Control option	Total capital investment (\$)	Total annualized costs (\$/yr)	EtO emission reductions (tpy)	EtO cost effectiveness (\$/ton)
1 (weekly)	200,200	326,000	11.3	29,000
2 (monthly)	200,200	73,000	11.1	6,600

Although Control Option 1 could be considered to be cost effective, there is uncertainty in the prevalence of heat exchange system leaks and commenters have identified potential disruptions associated with requiring operations and lab staff to conduct monitoring activities every week and to repair potentially complex equipment without allowances for delays. The EPA is finalizing Control Option 2 to add EtO standards in the PEPO NESHAP for heat exchange systems in EtO service pursuant to CAA section 112(d)(6) because it is lower cost and provides similar reductions to Option 1. However, the EPA observes that the conclusion that it is necessary under CAA section 112(d)(6) to require Option 2 based on the estimated costs and reductions is uncertain. For example, our analysis did not consider leak data from smaller heat exchangers such as those used in the PEPO source category. Accordingly, we intend to reconsider this control option to allow for a more complete understanding of these sources and their EtO emissions. The EPA's intent to reconsider will also allow us to ensure full consideration of similar provisions currently being reconsidered in the HON, a related chemical sector NESHAP frequently cross-referenced by the PEPO NESHAP. Pursuant to CAA section 112(d)(6), the

EPA is finalizing at 40 CFR 63.1423(b) the term “in ethylene oxide service” for heat exchange systems to mean any heat exchange system in a process that cools process fluids (liquid or gas) that are 1.0 percent or greater by weight of EtO. In addition, the EPA is finalizing monthly monitoring for leaks for heat exchange systems in EtO service using the Modified El Paso Method at 40 CFR 63.1435(a), which references the HON (i.e., 40 CFR 63.104(g)(6)) and accounts for differences between the HON and the PEPO NESHAP. If the owner or operator finds a leak, the EPA is requiring repair of the leak to reduce the concentration or mass emissions rate below the applicable leak action level as soon as practicable but no later than 45 days after collecting the sample, with delay of repair allowed based on a delay of repair action level of total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv—a level that, if exceeded during leak monitoring, would require immediate repair (i.e., the leak found cannot be put on delay of repair and would be required to be repaired within 30 days of the monitoring event).⁸⁸

⁸⁸ See 40 CFR 63.1435(a), which references the HON (i.e., 40 CFR 63.104(h)(6)) and accounts for differences between the HON and the PEPO NESHAP.

f. Wastewater in EtO Service

Comment: As previously discussed in this preamble, several commenters requested that the EPA consider evaluating EtO-specific standards under CAA section 112(d)(6) instead of under CAA section 112(f)(2). For wastewater that emits EtO, commenters suggested that the standard should focus on streams with higher concentrations and higher overall amounts of EtO. Commenters strongly opposed the EPA's proposed EtO concentration threshold of 1 ppmw in the definition of wastewater streams “in ethylene oxide service” and stated that there would be significant costs to control streams at this low concentration with minimal impact on emission reductions. Commenters further contended that the EPA should account for the total mass of EtO present in wastewater streams. They suggested that regulating only those streams exceeding a specific mass threshold could achieve substantial emission reductions while limiting the number of streams requiring control.

Response: The EPA is not finalizing standards under CAA section 112(f)(2) as part of this rulemaking. For more information on this decision, see section IV.A.4 of this preamble. Instead, as requested by commenters, the EPA has reevaluated control options for wastewater in EtO service under the

CAA section 112(d)(6) authority, which requires the Agency to take into account any “developments in practices, processes, or control technologies” and to consider factors such as cost.

Under this framework, to assess what standards may be appropriate for wastewater emitting EtO, the EPA considered previously reviewed information for wastewater controls from other rulemakings and considered the public comments. As part of that review, the EPA noted one rule requiring control of emissions from wastewater “in ethylene oxide service.” In the HON rulemaking, the EPA added EtO-specific requirements for wastewater in EtO service; the requirements for wastewater “in ethylene oxide service” are more stringent than for wastewater in organic HAP service.⁸⁹

Given the EtO-specific requirements in the HON, the minimal operational differences between controlling emissions from HON CMPUs and PEPO PMPUs, and the issues and recommendations provided by commenters (*i.e.*, focus on streams with higher EtO concentrations and higher overall amounts of EtO), the EPA evaluated two control options under CAA section 112(d)(6) for PEPO wastewater that emit EtO for the final rule. The first option is the same control option the EPA proposed for the PEPO NESHAP under CAA section 112(f)(2), which reflects the same EtO standard for wastewater in EtO service subject to the HON. This option defines “in ethylene oxide service” for wastewater as any wastewater stream that contains total annual average concentration of EtO greater than or equal to 1 ppmw at any flow rate, and a wastewater stream in EtO service is considered a Group 1 wastewater stream. Under Control Option 1, facilities achieve compliance for wastewater “in ethylene oxide service” by reducing, by removal or destruction, the concentration of EtO to a level less than 1 ppmw.

In response to commenter feedback urging the EPA to target wastewater streams with higher EtO concentrations and total EtO amounts, the Agency evaluated Control Option 2 for the final rule. This option mirrors Control Option 1 in regulating wastewater “in ethylene oxide service” but introduces key distinctions that offer greater flexibility. Most notably, in Control Option 2, the EPA raises the EtO concentration threshold that triggers control requirements from 1 ppmw to 10 ppmw, based on commenters’ suggestions that the Agency consider raising the

threshold and consider wastewater control requirements similar to those in 40 CFR part 61, subpart FF, which has a threshold of 10 ppmw (for benzene, the pollutant regulated in subpart FF). This means that only wastewater streams with EtO concentrations at or above 10 ppmw would be subject to control under Control Option 2, whereas Control Option 1 applies to streams with concentrations as low as 1 ppmw. The data from the CAA section 114 request show that PEPO wastewater streams reported with EtO concentrations below 10 ppmw contribute a small amount (less than 0.1 percent) to the overall wastewater EtO load and EtO emissions. This provision distinguishes Control Option 2 from Control Option 1 by prioritizing regulatory focus on streams with higher EtO concentrations and total emissions, where control measures are likely to be more effective at achieving emissions reductions. In response to commenter feedback urging the EPA to consider a total source EtO mass flow rate threshold in the final rule (*e.g.*, commenters recommended alignment with standards like 40 CFR part 61, subpart FF, that contain a total source mass flow rate threshold), Control Option 2 also introduces an exemption for wastewater streams in EtO service that is not part of Control Option 1. Specifically, Control Option 2 includes an exemption for wastewater streams in EtO service that cumulatively contain less than 1 megagram (approximately 1.1 tons) of EtO per year, thus excluding low-volume streams from control requirements.

Additionally, the EPA understands that the proposed compliance option (*i.e.*, reduce the concentration of EtO of each wastewater stream, by removal or destruction, to a level less than 1 ppmw), could be difficult to achieve for streams with a high EtO load. Therefore, the EPA is expanding the compliance pathways to allow facilities to choose between using three different performance standards for treatment processes, including reducing the concentration of EtO of each wastewater stream, by removal or destruction, to a level less than 1 ppmw, or complying with the Group 1 wastewater stream requirements outlined in 40 CFR 63.138(d) or (e). Per 40 CFR 63.138(d), the owner or operator must operate and maintain a steam stripper that meets certain design requirements. Per 40 CFR 63.138(e), the owner or operator must reduce, by removal or destruction, the mass flow rate of EtO by at least 98 percent. Although EtO is biodegradable, its low biodegradability factor indicates

that conventional biological treatment alone would only reduce its concentration by about half.⁹⁰ Therefore, additional treatment, such as steam stripping, is necessary to reliably remove the remaining EtO from the wastewater. With any of these compliance options, the EPA expects that facilities would use steam stripping to control the wastewater streams, but facilities would have more flexibility in demonstrating compliance. Regardless of the compliance option an owner or operator chooses, they still must comply with the applicable control device requirements in 40 CFR 63.139 and 40 CFR 63.145(i) and (j) when venting gases from the treatment process, as well as the applicable leak inspection provisions in 40 CFR 63.148.

To assess the impacts of the two control options, the EPA used information for 24 PEPO wastewater streams (each containing a total annual average concentration of EtO greater than or equal to 1 ppmw) that four PEPO facilities that received the CAA section 114 request provided to the EPA. Using this comprehensive dataset, the EPA estimated that both control options would affect five PEPO facilities (*i.e.*, all four PEPO facilities that received the CAA section 114 request plus one additional PEPO facility). Importantly, for the final rule, the EPA implemented procedures for addressing ambiguity in certain reported EtO concentrations by interpreting reported values (from the CAA section 114 request) that contained a “less than” symbol for values reported as “<1,000” and “<100” as one order of magnitude lower than stated. For instance, if a respondent reported a value as “<1,000,” the EPA’s approach for the final rule assumed the actual value to be “100.” The EPA’s underlying rationale for this approach is that if the respondent had intended to indicate a value below 100, they would have explicitly reported it as “<100” rather than using the broader “<1,000” threshold. This method ultimately provides a conservative estimate of impacts that accounts for ambiguity in the data.

The EPA calculated the cost of installing a steam stripper using the cost algorithm for wastewater steam stripper requirements, used for the development of the HON, for each of the five PEPO facilities that the Agency determined

⁹⁰ EtO has a fraction emitted (Fe) factor of 0.5. The Fe is the mass fraction of a HAP emitted from the wastewater collection and downstream biological treatment system. Fe is an indicator of the fraction of a compound expected to be an air emission out of wastewater in typical chemical sector collection and treatment systems.

⁸⁹ 89 FR 42932 (May 16, 2024).

the two control options would impact.⁹¹ For the final rule, the impact analysis reflects 2024 dollars. The EPA also uses an interest rate of 7.5 percent over a 20-year period in the capital recovery factor for steam strippers. See the document

titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking, for details on the

assumptions and methodologies the EPA used in this analysis.

Table 5 of this preamble presents the nationwide impacts for the two control options considered for the final rule for wastewater in EtO service.

TABLE 5—NATIONWIDE EMISSIONS REDUCTIONS AND COST IMPACTS OF CONTROL OPTIONS CONSIDERED FOR WASTEWATER IN EtO SERVICE AT PEPO FACILITIES

Control option	Total capital investment (\$)	Total annualized costs (\$/yr)	EtO emission reductions (tpy)	EtO cost effectiveness (\$/ton)
1	14,100,000	5,500,000	38.2	144,000
2	13,600,000	5,200,000	37.2	140,000

While the cost effectiveness values of both control options are within the range of values associated with finalized regulatory options in recent rulemakings regulating EtO emissions, such as the commercial sterilizers NESHAP,⁹² and are within the range of historically accepted cost-effectiveness values for highly toxic HAP (such as hexavalent chromium⁹³), the EPA is finalizing Control Option 2 in lieu of Control Option 1. The EPA is finalizing Control Option 2 to add EtO standards in the PEPO NESHAP for wastewater in EtO service pursuant to CAA section 112(d)(6) because this option offers meaningful emissions reductions while significantly reducing compliance burdens, compared to Control Option 1. Commenters have emphasized the importance of targeting substantial sources of EtO emissions without imposing unnecessary complexity on facilities managing smaller sources. The EPA recognizes that requiring control of minor EtO sources can introduce implementation challenges, which the EPA has mitigated by refining the definition of “in ethylene oxide service.”

For wastewater “in ethylene oxide service,” the EPA’s data indicate that the revised criteria (*i.e.*, Control Option 2) would exclude at least 30 percent of the wastewater streams in EtO service that the proposed rule (*i.e.*, Control Option 1) would have affected. The EPA’s analysis indicates that a small subset of wastewater streams accounts for the majority of EtO emissions at most PEPO facilities. In contrast, low-flow, low-concentration, or intermittent streams contribute minimally to EtO emissions at most PEPO facilities and are often subject to significant variability, making consistent control

both technically challenging and potentially inefficient.

Overall, the EPA believes Control Option 2 strikes a balance between meaningful emissions reductions and practical implementation, making it a sound choice despite having a similar cost to Control Option 1. Therefore, pursuant to CAA section 112(d)(6) the EPA is finalizing at 40 CFR 63.1423(b) the term “in ethylene oxide service” for wastewater to mean any wastewater stream that contains total annual average concentration of EtO greater than or equal to 10 ppmw at any flow rate. The EPA is also updating the definition of “wastewater” in the final rule at 40 CFR 63.1423(b) to align with this change. In addition, the EPA is finalizing, as proposed, the procedures for determining whether a wastewater stream is in EtO service within the definition of the term “in ethylene oxide service” by reference to 40 CFR 63.109 for PEPO wastewater streams in EtO service. The EPA also is finalizing at 40 CFR 63.1433(s)(23) a requirement—by reference to the HON and accounting for differences between the HON and the PEPO NESHAP—that owners and operators must reduce the concentration of EtO of each wastewater stream, by removal or destruction, to a level less than 1 ppmw, or comply with the Group 1 wastewater stream control requirements outlined in 40 CFR 63.138(d) or (e). Additionally, the EPA is finalizing an exemption to this requirement at 40 CFR 63(s)(23)(iii)(D) for wastewater streams in EtO service that cumulatively contain less than 1 megagram (approximately 1.1 tons) of EtO per year, where the owner or operator annually samples the exempted wastewater streams to verify that they are below this threshold. The EPA also is finalizing language at 40 CFR

63.1433(s)(23) to clarify that if an owner or operator elects to either reduce the EtO concentration in each wastewater stream to below 1 ppmw or achieve at least a 98 percent reduction in EtO mass flow rate, they must conduct a performance test to demonstrate compliance instead of a design evaluation. Alternatively, if the owner or operator chooses to operate and maintain a steam stripper that meets the design specifications outlined in 40 CFR 63.138(d), the EPA is not requiring a performance test or design evaluation.

4. What is the rationale for our final approach and final decisions for the technology review?

The EPA’s technology review focused on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the EPA promulgated the previous technology review for the PEPO NESHAP.⁹⁴ Specifically, the EPA focused the technology review on all existing MACT standards for the various emission sources in the PEPO Production source category, including heat exchange systems, storage vessels, process vents, wastewater, and equipment leaks in organic HAP service. In the proposal, the EPA identified cost-effective developments for PEPO heat exchange systems, storage vessels, process vents, and equipment leaks, and the Agency proposed revising the standards for these four emissions sources under the technology review. The EPA did not identify developments in practices, processes, or control technologies for wastewater in organic HAP service. For managing fugitive emissions, the EPA also proposed a fence-line monitoring work practice standard under the technology review. Further information regarding the

⁹¹ U.S. EPA, *Hazardous Air Pollutant Emissions from Process Units in the Synthetic Organic Chemical Manufacturing Industry—Background Information for Proposed Standards*, vol. 1C: Model

Emission Sources (Nov. 1992) (EPA–453/D–92–016c).

⁹² See 89 FR 24090 (Apr. 5, 2024).

⁹³ See 77 FR 58227–28 and 58239 (Sept. 19, 2012).

⁹⁴ See 59 FR 17340 (Mar. 27, 2014).

technology review is in the proposed rule and in the supporting materials in the rulemaking docket.

During the public comment period, the EPA received several comments on the Agency's proposed determinations for the technology review. The comments and the EPA's specific responses and rationale for the Agency's final decisions are in section IV.B.3 of this preamble and in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

No information presented by commenters has led the EPA to change the Agency's proposed determination under CAA section 112(d)(6) for batch process vents, equipment leaks, and wastewater in organic HAP service. For batch process vents in organic HAP service (those associated with the use of a nonepoxide organic HAP to make or modify the product), the EPA is finalizing the determination that revising the PEPO NESHAP control threshold from 26,014 lb/yr to 10,000 lb/yr and removing the associated flow rate applicability thresholds is a cost-effective development under CAA section 112(d)(6). For equipment leaks in organic HAP service, the EPA is finalizing the Agency's determination that using a leak definition of 100 ppmv for valves that are in either gas/vapor service or light liquid service is a cost-effective development under CAA section 112(d)(6). For wastewater in organic HAP service, the EPA is finalizing the Agency's determination that no changes to the standard are warranted.

However, based on comments received on the proposed revisions for heat exchange systems and storage vessels in organic HAP service, the EPA is making two minor clarifications: (1) owners and operators do not have to monitor their regulated heat exchange systems using water sampling methods or a surrogate indicator if the heat exchange system is monitored for leaks using the Modified El Paso Method, and (2) the Agency is allowing more time for owners and operators to install upgraded deck fittings and controls for guidepoles for all storage vessels equipped with an IFR. Additionally, based on comments received on the proposed revisions for continuous process vents in organic HAP service, the EPA is retaining use of the TRE index value concept and the current definition of a "Group 1 continuous process vent." This definition refers to a process vent from a continuous unit

operation that is associated with the use of a nonepoxide organic HAP to make or modify the product and that has: (1) a flow rate greater than or equal to 0.005 scmm, (2) a total organic HAP concentration greater than or equal to 50 ppmv, and (3) a TRE index value less than or equal to 1.0. Also, based on comments received on the proposed fenceline monitoring requirements, the final rule excludes all elements of the proposed fenceline monitoring requirements.

Finally, the EPA has broadened its technology review beyond the scope of PEPO emission sources in organic HAP service. This expanded review now evaluates developments in practices, processes, and control technologies for PEPO sources that specifically emit EtO. This approach responds to public comments urging the Agency to evaluate EtO-specific standards under CAA section 112(d)(6) rather than under CAA section 112(f)(2). Consequently, the Agency is addressing EtO emissions from PEPO production sources under its authority provided by CAA section 112(d)(6). Based on comments received, the EPA is finalizing requirements under CAA section 112(d)(6), as described in sections IV.B.3.c through IV.B.3.f of this preamble, for EtO-emitting sources that require further control of EtO emissions beyond what is required by the organic HAP standards.

C. Amendments Pursuant to CAA Section 112(d)(2) and (3) and 112(h) for the PEPO Production Source Category

1. What did we propose pursuant to CAA section 112(d)(2) and (3) and 112(h) for the PEPO Production source category?

Under CAA section 112(d)(2) and (3), the EPA proposed to amend the operating and monitoring requirements for flares used to reduce emissions from PEPO production processes. The EPA proposed to directly apply the petroleum refinery flare rule requirements in 40 CFR part 63, subpart CC, to PEPO flares with clarifications, including, but not limited to, specifying that several definitions in 40 CFR part 63 subpart CC that apply to petroleum refinery flares also apply to PEPO flares and specifying additional requirements when an owner or operator uses a gas chromatograph or mass spectrometer for compositional analysis. Specifically, the EPA proposed to retain the General Provisions requirements of 40 CFR 63.11(b) such that PEPO flares operate pilot flame systems continuously and that these flares operate with no visible emissions (except for periods not to exceed a total of five minutes during

any two consecutive hours) when the flare vent gas flow rate is below the smokeless capacity of the flare. The EPA also proposed to consolidate measures related to flare tip velocity and new operational and monitoring requirements related to the combustion zone gas for PEPO flares. Further, in keeping with the elimination of the startup, shutdown, and malfunction exemption, the EPA proposed a work practice standard related to the visible emissions limits during periods when a PEPO flare is operated above its smokeless capacity (e.g., periods of emergency flaring). The EPA proposed eliminating the cross-references to the General Provisions and instead specifying all operational and monitoring requirements that apply to PEPO flares in the applicable subparts.

In addition, the EPA proposed provisions and clarifications in the PEPO NESHAP for bypass lines on closed vent systems, and the Agency proposed adding work practice standards for certain activities where alternatives are appropriate to ensure that CAA section 112 standards apply continuously, consistent with *Sierra Club v. EPA*.

For bypass lines on closed vent systems, the EPA proposed that an owner or operator may not bypass the APCD at any time, that a bypass is a violation, and that the owner or operator must estimate, maintain records, and report the quantity of organic HAP released.

Under CAA section 112(h), the EPA proposed a work practice standard for maintenance vents and equipment openings requiring that, prior to opening process equipment to the atmosphere, the owner or operator of that equipment must: (1) drain and purge the equipment to a closed system so that the concentration of the vapor in the equipment served by the maintenance vent is less than or equal to 10 percent of the lower explosive limit (LEL); (2) open and vent the equipment to the atmosphere only if the 10 percent LEL cannot be demonstrated and the pressure is less than or equal to 5 pounds per square inch gauge (psig), provided no active purging of the equipment occurs to the atmosphere until the LEL criterion is met; (3) open the equipment when it would emit less than 50 lbs of VOC to the atmosphere; or (4) for installing or removing an equipment blind, depressurize the equipment to 2 psig or less and maintain pressure of the equipment where purge gas enters the equipment at or below 2 psig during the blind flange installation, provided that the owner or

operator cannot meet the other proposed work practice standards.

Also under CAA section 112(h), the EPA proposed a work practice standard for storage vessel degassing to allow owners or operators to vent storage vessels to the atmosphere once a storage vessel degassing concentration threshold is met (*i.e.*, once the vapor space concentration is less than 10 percent of the LEL) and the owner or operator has removed all standing liquid from the vessel to the extent practicable. The EPA also proposed an organic HAP concentration cutoff of 5,000 ppmv (measured as methane) as an equivalent alternative to reducing the vapor space concentration to less than 10 percent of the LEL. In addition, the EPA proposed that owners or operators may open a floating roof storage vessel prior to degassing to set up equipment (*i.e.*, make connections to a temporary control device), but owners or operators must use this approach in a limited manner and not actively purge the storage vessel while making connections. Finally, the EPA proposed to prohibit owners and operators from filling the storage vessel during these periods (such that the vessel would emit HAP to the atmosphere for a limited amount of time due to breathing losses only).

To clarify the standards applying to pressure vessels, the EPA proposed to define pressure vessel to mean “a storage vessel that is used to store liquids or gases and is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the pressure vessel during filling of the pressure vessel to its design capacity” and to remove the exemption for “pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere” from the definition of storage vessel. The EPA proposed requiring no detectable emissions at all times (*i.e.*, each point on the pressure vessel where total organic HAP could potentially be emitted must have an instrument reading less than 500 ppmv); initial and annual monitoring using EPA Method 21 of 40 CFR part 60, appendix A–7; and routing organic HAP through a closed vent system to a control device (*i.e.*, no releases to the atmosphere through any points on the pressure vessel). The EPA also proposed requiring owners or operators to control gaseous emission streams from surge control vessels and bottoms receivers—if considered process vents as defined in 40 CFR 63.1423—to reduce organic HAP in accordance with the applicable process vent control standards outlined in 40 CFR 63.1425 through 63.1431. In

addition, the EPA proposed that owners and operators of PEPO transfer racks that load materials with an MTVP greater than or equal to 0.5 pounds per square inch absolute (psia) (3.45 kPa) under actual storage conditions (*i.e.*, Group 1 transfer racks as defined in 40 CFR 63.1423(b)) must comply with the HON requirements at 40 CFR 63.126 through 63.130, if the material contains organic HAP as defined by 40 CFR 63.1423(b). The EPA proposed that the requirements to use a vapor balance system or reduce emissions by 90 percent during loading operations (at a transfer rack) are consistent with CAA section 112(d) controls and reflect the MACT floor for transfer racks at existing PEPO sources. The EPA also proposed that the transfer rack requirements in the HON (*i.e.*, to reduce emissions by 98 percent by weight or to an exit concentration of 20 ppmv during loading operations at a transfer rack) are consistent with CAA section 112(d) controls and reflect the MACT floor for transfer racks at new PEPO sources and beyond-the-floor control for transfer racks at existing PEPO sources. In addition, the EPA proposed the addition of butylene oxide to the definition of “epoxide” in 40 CFR 63.1423(b) and to the list of HAP presented in Table 4 to the PEPO NESHAP, and the EPA proposed to remove the 40 CFR 63.1420(d)(3) exemption for certain processes currently excluded from the affected source (*i.e.*, unregulated steps in the PEPO production process which may include but are not limited to solvent removal, purification, drying, and solids handling operations). The EPA proposed that all these requirements are consistent with CAA section 112(d) or 112(h) and reflect the MACT floor, and except for PEPO transfer racks, the EPA did not identify any additional options beyond these (*i.e.*, beyond-the-floor options) for controlling emissions from these emission sources. For existing PEPO transfer racks, the EPA did propose a beyond-the-floor option. More information concerning the EPA’s proposed requirements under CAA section 112(d)(2) and (3) and 112(h) is in section IV.D of the proposal preamble.

2. How did the revisions pursuant to CAA section 112(d)(2) and (3) and 112(h) change since proposal?

Except for two minor revisions based on comment, the EPA is finalizing, as proposed, all the amendments described in section IV.C.1 of this preamble. In response to a commenter’s request, the EPA is incorporating operational and monitoring requirements for pressure-

assisted multi-point flares into the final rule. The EPA is also revising the Agency’s proposal based on comment to include overlap provisions in the PEPO NESHAP (for owners and operators currently complying with the MON) related to the removal of the 40 CFR 63.1420(d)(3) exemption for certain processes currently excluded from the affected source.

3. What key comments did we receive on the proposed revisions pursuant to CAA section 112(d)(2) and (3) and 112(h), and what are our responses?

This section provides summaries of and responses to the key comments received regarding the EPA’s proposed emission standards for transfer operations and the Agency’s proposal to remove the 40 CFR 63.1420(d)(3) exemption for certain processes currently excluded from the affected source. Other comment summaries and the EPA’s responses for issues raised regarding the proposed revisions for flares, bypass lines on closed vent systems, maintenance vents and equipment openings, storage vessel degassing, planned routine maintenance of storage vessels, pressure vessels, surge control vessels and bottoms receivers, and the addition of butylene oxide to the rule are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

a. Transfer Racks

Comment: A commenter argued that the EPA did not adhere to CAA section 112(d)(2) because the EPA did not indicate that it considered costs in determining that a beyond-the-floor standard of 98 percent by weight control or an outlet concentration of 20 ppmv was appropriate for transfer racks at PEPO sources. The commenter stated that the EPA must provide a reasonable explanation of how the Agency determined that the additional costs of going from 90 percent control to 98 percent control are warranted or refrain from finalizing beyond-the-floor standards for transfer racks at existing PEPO sources.

Response: The EPA is not changing the final rule as a result of this comment. The EPA disagrees with the commenter that the Agency did not indicate that the EPA considered costs in determining that a beyond-the-floor standard of 98 percent by weight control or an outlet concentration of 20 ppmv was appropriate for transfer racks at PEPO sources. In the EPA’s proposal,

the Agency provided a reasonable explanation of how the Agency determined that no impacts would occur from the shift from 90 percent control to 98 percent control (*i.e.*, materials loaded through transfer racks at PEPO Production sources have low vapor pressures of less than 0.3 psia based on CAA section 114 data and do not meet the vapor pressure applicability criteria). Notably, commenters did not provide any additional cost information or provide any additional information for the EPA to consider in revising its analysis. As the EPA pointed out in the proposal, achieving a 98 percent control efficiency for transfer racks is a well-established practice under existing chemical sector regulations (*e.g.*, the HON), and the PEPO NESHAP consistently references the HON for various emission standards. Although specific data for PEPO-related transfer racks is limited, the widespread implementation of the 98 percent control standard at comparable sources—and even within the same facility when co-located with a HON source—demonstrates its practicality and appropriateness. Additionally, as stated in the EPA's proposal, the standards in Louisiana, Texas, and the HON include vapor balancing as a compliance option, which is a proven, inexpensive, and straightforward control method.

b. 40 CFR 63.1420(d)(3) Exemption

Comment: A commenter stated that there are instances where the PEPO NESHAP ceases to apply and another 40 CFR part 63 NESHAP becomes applicable, and therefore it is unnecessary for facilities already complying with a different 40 CFR part 63 NESHAP to change compliance to the PEPO NESHAP. The commenter discussed an example where some solvent removal, purification, drying, and solids handling steps associated with a PMPU at a facility are subject to and already complying with other subparts of 40 CFR part 63, for example the MON. The commenter requested that the EPA either maintain the current definition of “affected source” or allow operations that are currently complying with another subpart of 40 CFR part 63 the option to continue to comply with these other part 63 regulations. In addition, the commenter contended that changing the applicable MACT standard involves a substantial amount of time and effort, including, but not limited to, (1) completing an applicability assessment for PEPO MACT, (2) preparing and submitting additional reports such as the Notification of Compliance Status and periodic reports,

(3) revising title V operating permits to reflect that a new MACT standard is applicable to the affected source, and (4) updating compliance tracking processes at the site accordingly. Similarly, another commenter argued that the EPA should exempt facilities that have already implemented MON requirements and/or that conduct testing for applicability of MON requirements.

Response: The EPA agrees with the commenters that the EPA should not require owners and operators already subject to and complying with the MON (for reactions or processing that occur after completion of epoxide polymerization and all catalyst removal steps) to transition to the PEPO NESHAP. Allowing continued compliance with the MON is a reasonable and practical approach that avoids unnecessary regulatory burden, considering that the regulatory text previously excluded these processes from the definition of affected source. Therefore, although the EPA is finalizing the proposal to remove the exemption at 40 CFR 63.1420(d)(3), the Agency is revising the PEPO NESHAP at 40 CFR 63.1420(d)(4) to allow owners and operators to comply with the MON for reactions or processing (that emit organic HAP) that occur after completion of epoxide polymerization and all catalyst removal steps if they are currently complying with the MON.⁹⁵ Commenters did not identify any other specific part 63 regulation, aside from the MON, with which PEPO facilities currently comply to demonstrate control of organic HAP emissions from post-polymerization reactions or processing after catalyst removal. Thus, the EPA is limiting the finalized overlap provisions at 40 CFR 63.1420(d)(4) to the MON.

4. What is the rationale for our final approach and final decisions for the revisions pursuant to CAA section 112(d)(2) and (3)?

The EPA evaluated the comments on the EPA's proposed amendments to revisions for flares used as APCDs, bypass lines on closed vent systems, maintenance vents and equipment openings, storage vessel degassing, planned routine maintenance of storage vessels, pressure vessels, surge control vessels and bottoms receivers, and the addition of butylene oxide. For the reasons explained in section III.D of the proposal preamble, the EPA finds that the flare amendments are necessary to

ensure that flares used as APCDs achieve the required level of MACT control and meet 98 percent destruction efficiency at all times as well as to ensure that CAA section 112 standards apply at all times. Similarly, the requirements for bypass lines on closed vent systems, maintenance vents and equipment openings, storage vessel degassing, and planned routine maintenance of storage vessels are necessary for consistency with the requirement in *Sierra Club v. EPA* that CAA section 112 standards apply at all times. Also, the requirements for pressure vessels, surge control vessels and bottoms receivers, transfer racks, and certain reactions or processing that occur after completion of epoxide polymerization and all catalyst removal steps are appropriate standards for these emissions points, and the addition of butylene oxide to the rule is reasonable to correct the omission in table 4 of the subpart in the original NESHAP.

Therefore, the EPA is finalizing the proposed provisions for flares (including the addition of monitoring and operating requirements for pressure-assisted multi-point flares), finalizing standards for bypass lines on closed vent systems, maintenance vents and equipment openings, storage vessel degassing, planned routine maintenance of storage vessels, pressure vessels, surge control vessels and bottoms receivers, transfer racks, and certain reactions or processing that occur after completion of epoxide polymerization and all catalyst removal steps, and finalizing the addition of butylene oxide to the rule. More information and rationale concerning all the amendments the EPA is finalizing pursuant to CAA section 112(d)(2) and (3) and 112(h) are in the preamble to the proposed rule, in section IV.C.3 of this preamble, and in the comments and the Agency's specific responses to the comments in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

D. Other Amendments to the PEPO NESHAP

1. What other amendments did we propose for the PEPO Production source category?

As discussed in section I.C.2 of this preamble, the 2014 petition for reconsideration requested that the EPA: (1) remove the affirmative defense provisions from the rules; (2) provide adequate opportunity to comment on

⁹⁵ The EPA notes that this allowance is for sources already determined to be MON sources and, therefore, has no bearing on the MACT floor determination specific to the PEPO Production source category.

the requirements associated with emissions from PRDs; (3) redo the risk assessment using updated emission factors; (4) set additional monitoring requirements for flares to reduce flaring emissions; (5) set fence-line monitoring requirements; (6) reconsider its decision not to set standards that account for developments in LDAR; and (7) use existing regulatory authority to strengthen chemical facility safety and prevent accidents. In response to the petition for reconsideration, the EPA evaluated each of the seven issues raised in the petition and proposed targeted actions accordingly. First, for issue (1), the EPA deferred to a separate rulemaking to address removal of affirmative defense in the PEPO NESHAP.⁹⁶ Next, to address issue (2) raised in the petition for reconsideration, as outlined in section I.C.2 of this preamble, the EPA proposed soliciting public comment on the PRD requirements specified in 40 CFR 63.1434(c), which were finalized in the 2014 rule.⁹⁷ Petitioners contended that the EPA had not given them a sufficient opportunity to comment on the provisions related to PRD emissions. However, the EPA noted in the proposal that Petitioners' argument regarding the EPA's justification for allowing PEPO facilities a three-year compliance period is no longer applicable, as all affected sources (*i.e.*, both new and existing) have now been subject to the PRD requirements since March 27, 2017. To address issues (3) through (6) raised in the petition for reconsideration, as outlined in section I.C.2 of this preamble, the EPA proposed that the Agency's actions in this rulemaking would address issues (3), (4), (5), and (6) in the normal course of review of the PEPO NESHAP in accordance with CAA section 112. Finally, the EPA also proposed that issue (7), to use existing regulatory authority to strengthen chemical facility safety and prevent accidents in accordance with the U.S. Chemical Safety and Hazard Investigation Board and Executive Order 13650, is outside the scope of CAA section 112(f)(2) and 112(d)(6).

The EPA also proposed a requirement that owners or operators submit electronic copies of certain required performance test reports, flare management plans, and periodic reports through the EPA's CDX using the CEDRI. Additionally, the EPA proposed two narrow circumstances in which owners or operators may seek extensions to the deadline if they are prevented from reporting by conditions

outside of their control within five business days of the reporting deadline. The EPA proposed that an extension may be appropriate due to outages of the EPA's CDX or CEDRI that preclude an owner or operator from accessing the system and submitting required reports. The EPA also proposed that an extension may be appropriate due to a force majeure event, such as an act of nature, act of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

In addition, the EPA proposed ongoing performance tests (every five years) for owners and operators using a combustion, recovery, or recapture device to comply with an epoxide or organic HAP percent reduction efficiency requirement in 40 CFR 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2); an epoxide concentration limitation in 40 CFR 63.1425(b)(1)(ii) or (b)(2)(iii); or an annual epoxide emission limitation in 40 CFR 63.1425(b)(1)(iii) or (b)(2)(iv).

The EPA also proposed to eliminate the option in 40 CFR 63.1427(a)(2)(ii) that exempts owners or operators using ECO as a control technique from a requirement to directly measure the concentration of unreacted epoxide when determining the batch cycle percent epoxide emission reduction; instead, the EPA proposed that owners and operators conduct the comparison of epoxide concentration using direct measurement for one product from each product class, even if uncontrolled epoxide emissions before the end of the ECO are less than 10 tpy.

The EPA proposed to refer to 40 CFR part 63, subpart F, in 40 CFR 63.1423(a) for instances where a definition in the PEPO NESHAP points to either 40 CFR part 63, subpart G or H. The EPA also proposed a new definition of "heat exchange system" at 40 CFR 63.1423(b) as well as reference clarifications to properly reference the correct HON citation for "continuous recorder," "maximum true vapor pressure," "residual," and "waste management unit." In addition, the EPA proposed a definition of "in organic HAP service" to include a heat exchange system, to be consistent with the use of "in organic HAP service" in the definition of "heat exchange system."

The EPA proposed adding monitoring requirements for owners or operators using adsorbers that cannot be regenerated and regenerative adsorbers that are regenerated offsite. The EPA also proposed that owners or operators of this type of APCD use dual (two or more) adsorbent beds in series and conduct monitoring of HAP or TOC on the outlet of the first adsorber bed in

series using a sample port and a portable analyzer or chromatographic analysis.

Additionally, the EPA proposed that for the PEPO Production source category, the inclusion of 1-BP as an organic HAP would not have any effect on the MACT standards in the PEPO NESHAP. Finally, the EPA proposed revisions to clarify text or correct typographical errors, grammatical errors, and cross-reference errors. Section IV.E.7 of the proposal preamble discusses these editorial corrections and clarifications.

2. How did the other amendments for the PEPO Production source category change since proposal?

Regarding the issues raised in the May 2014 petition for reconsideration, as discussed in sections I.C.2 and IV.D.1 of this preamble, the EPA previously stated its intent to publish a **Federal Register** notice in response.⁹⁸ This final action serves as that notice and formally addresses all remaining issues raised in the reconsideration petition for the 2014 final rule. As a result, the EPA considers all these issues resolved.

First, for issue (1), since proposal, the EPA has finalized a separate rulemaking addressing removal of affirmative defense in the PEPO NESHAP, so the EPA considers this issue to be fully resolved.⁹⁹ The EPA received no comments on the proposed actions related to issues (2), (4), and (7), and we consider these three issues resolved.

Importantly, the EPA acknowledges that we initially proposed that the second residual risk review for the PEPO Production source category addressed issue (3). Although the EPA is no longer finalizing any part of that proposed second residual risk review, the Agency determines in this final rulemaking that no further action is necessary to resolve issue (3). On May 1, 2013, environmental groups filed a lawsuit against the EPA, alleging that the Agency had failed to review and, if necessary, revise emissions factors at least once every three years as required in CAA section 130.¹⁰⁰ In the complaint,

⁹⁶ The petitioners requested that the EPA: (1) remove the affirmative defense provisions from the rules; (2) provide adequate opportunity to comment on the requirements associated with emissions from PRDs; (3) redo the risk assessment using updated emission factors; (4) set additional monitoring requirements for flares to reduce flaring emissions; (5) set fence-line monitoring requirements; (6) reconsider its decision not to set standards that account for developments in LDAR; and (7) use existing regulatory authority to strengthen chemical facility safety and prevent accidents. See section I.C.2 of this preamble for more details.

⁹⁹ See 90 FR 42323 (Sept. 2, 2025).

¹⁰⁰ *Air Alliance Houston, et al. v. McCarthy*, No. 1:13-cv-00621-KBJ (D.D.C.).

⁹⁶ See 89 FR 52425 (June 24, 2024).

⁹⁷ See 79 FR 17340 (Mar. 27, 2014).

the Plaintiffs sought to compel the EPA to expeditiously complete a review of the VOC emissions factors for industrial flares, liquid storage tanks, and wastewater collection, treatment and storage systems, and, if necessary, revise these factors. In 2015, the EPA finalized new or revised factors for NO_x, CO, and VOC for flares but did not revise factors for wastewater or tanks. The EPA has determined that none of the revisions to the emission factors are centrally relevant or bear on the HAP emissions estimates and associated findings for the residual risk review finalized in 2014 for the PEPO Production source category.¹⁰¹ The final rule addressing the risk review for the PEPO Production source category used the best available data to conduct the review. The updated emissions factors would not have led the EPA to revise the HAP emissions data used in the risk assessment because the data does not specify the estimation method used (and generally, facilities would not use these emissions factors to estimate flare HAP emissions).¹⁰² Additionally, no emissions data from PEPO flares was used to revise the emission factors.

With respect to issue (5), the EPA proposed fenceline monitoring requirements for the PEPO Production source category in the 2024 proposal. After soliciting and considering public comments on fenceline monitoring, the EPA concludes in this final rulemaking that it is not necessary to set a fenceline monitoring standard for the PEPO Production source category at this time, thus concluding the reconsideration of issue (5). See section IV.B.3.b of this preamble for the EPA's response to key comments on fenceline monitoring. Similarly, with respect to issue (6), the EPA proposed changes to the equipment leaks standards in the 2024 proposal. After soliciting and considering public comments on these equipment leaks standards, the EPA is finalizing changes to the equipment leaks standards for the PEPO Production source category, thus concluding the reconsideration of issue (6). See section IV.B.3.d of this preamble and the document titled *Summary of Public Comments and Responses for*

National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry for the EPA's response to comments on equipment leaks standards.

Beyond addressing the issues raised in the petition for reconsideration, the EPA is finalizing, as proposed, all the amendments described in section IV.D.1 of this preamble with no changes based on comment except minor clarifying edits to the spreadsheet reporting template for the periodic report. The final version of the template will be on the CEDRI website. The EPA also is revising the proposal in response to public comments to limit the number of product classes requiring direct measurement. This change reflects the removal of the exemption in 40 CFR 63.1427(a)(2)(ii), which previously allowed owners or operators using ECO as a control technique to avoid directly measuring unreacted epoxide concentrations when calculating batch cycle percent epoxide emission reduction.

3. What key comments did we receive on the other amendments for the PEPO Production source category, and what are our responses?

This section provides summaries of and responses to the key comments received regarding the EPA's proposal to eliminate the option in 40 CFR 63.1427(a)(2)(ii) that exempts owners or operators using ECO as a control technique from a direct measurement requirement. The EPA did not receive many substantive comments on the other amendments discussed in this section IV.D of this preamble. The comments the EPA received regarding other amendments generally include issues related to electronic reporting, ongoing performance testing, adsorbers that cannot be regenerated and regenerative adsorbers that are regenerated offsite, and revisions that the Agency proposed for clarifying text or correcting typographical errors, grammatical errors, and cross-reference errors. The comments and the EPA's specific responses to these issues are in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

Comment: Some commenters opposed the EPA's proposal to remove the option in 40 CFR 63.1427(a)(2)(ii) that exempts owners or operators using ECO as a control technique from a requirement to confirm epoxide emissions reductions with direct measurements if uncontrolled epoxide emissions were

less than 10 tpy. One commenter noted that the EPA did not provide any documentation justifying the change and, thus, the Agency has not provided commenters with an opportunity to comment on the EPA's reasoning. The commenters expressed that obtaining direct measurement of unreacted epoxide in process liquids can expose operators to potentially hazardous conditions including not only the presence of unreacted epoxides but also elevated temperatures and pressures. Similarly, one commenter noted that vapor phase oxide analysis is complex, expensive, can result in safety issues, and is difficult due to the short duration of venting during batches. Additionally, the commenters expressed that some process units may produce hundreds of different products over the course of a year and requiring direct measurement for each product places an unnecessary burden on facilities. The commenters requested that the EPA allow the use of bench-scale or pilot-scale test data or historical data in addition to direct measurement. Alternatively, the commenters suggested that the EPA could require sampling for one or two representative "worst-case" product classes for direct measurement and comparison to calculated epoxide concentrations.

Response: Similar to performance tests, requiring direct measurement to verify modeled emissions reductions is an important compliance assurance measure to ensure that the emission standards are met and enforceable (*i.e.*, that ECO is achieving the required epoxide reduction, including for those with uncontrolled epoxide emissions below 10 tpy). The commenters did not explain how pilot-scale or bench-scale test data could be a sufficient substitute for direct measurement of actual operations or how scaling up these test data would affect the accuracy of the measurements. However, the EPA recognizes that direct measurement may be difficult when a PMPU may produce hundreds of products. To alleviate the burden associated with direct measurement when a PMPU is producing a wide variety of products, the EPA is finalizing an alternative for those with uncontrolled epoxide emissions below 10 tpy to limit the required direct measurement to a few representative products. Specifically, for products with the same capping epoxide (*i.e.*, the last epoxide into the reactor before the end of the epoxide feed), owners or operators can verify the estimation method with direct measurement of three products representing the lowest, average, and

¹⁰¹ 59 FR 17340 (Mar. 27, 2014).

¹⁰² For example, the Texas Commission on Environmental Quality's guidance for developing VOC (and subsequently, organic HAP) emissions inventories for flares states that "Emissions calculations for these contaminants are based on the flared gas flow rate and composition, and the appropriate destruction efficiency, which depends upon the actual flare operation." Additionally, it states, "Do not use the total hydrocarbon or VOC emission factors from AP-42, Section 13.5, to estimate emissions." See <https://www.tceq.texas.gov/downloads/air-quality/point-source/guidance/rg-360-20-appendix-a.pdf>.

highest estimated emissions at the end of the ECO. If the difference between the directly determined epoxide concentration and the calculated epoxide concentration is less than 25 percent for each product, then the selected estimation method is an acceptable alternative to direct measurement for all products produced in the reactor with the same capping epoxide. The capping epoxide is relevant because the amount of unreacted epoxide can vary considerably depending on reaction kinetics, and in general, propylene oxide reacts an order of magnitude slower than ethylene oxide at a given catalyst level, temperature, and pressure.¹⁰³ This approach is similar to an instrument calibration curve and allows owners and operators to verify that their estimation methodology works over the entire range of expected emissions for the PMPU. Verifying the estimation methodology over the range of expected conditions provides relief from having to conduct hundreds of measurements while maintaining an acceptable level of assurance of compliance with the emission standard.

4. What is the rationale for our final approach and final decisions regarding the other amendments for the PEPO Production source category?

Based on the comments received on these other amendments, the EPA is generally finalizing all proposed requirements. In a few instances, the EPA received comments that led to additional minor editorial corrections and technical clarifications in the final rule. The EPA's rationale for these corrections and technical clarifications is in section IV.D.3 of this preamble and in the document titled *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production Industry*, which is in the docket for this rulemaking.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. What are the affected facilities?

During the public comment period for the proposed rule, the EPA determined that two of the originally identified 25 facilities that the EPA considered in the proposal are no longer subject to the PEPO NESHAP, reducing the total to 23 facilities subject to the PEPO NESHAP. The list of these 23 facilities is in the document titled *List of Facilities Subject*

to the PEPO NESHAP, for Final Rule, which is in the docket for this action.

B. What are the air quality impacts?

The changes in projected air quality impacts since proposal result from the change in the number of facilities that the EPA estimates are subject to the PEPO NESHAP (see section IV.A of this preamble), the EPA's decision to not finalize the proposal to remove the TRE index value concept for continuous process vents in organic HAP service, the EPA's decision to not finalize the proposed fence line monitoring requirements, and the EPA's reevaluations related to EtO-specific standards covering process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in EtO service under CAA section 112(d)(6) instead of section 112(f)(2), based on comments received (see section IV.B.3 of this preamble). The EPA estimates HAP and VOC emission reductions of approximately 97 and 130 tpy, respectively. The EPA projects that the EtO emission standards will reduce EtO emissions from PEPO processes by approximately 12 tpy (based on reported emissions inventories). More information about the estimated emission reductions and secondary impacts of this final action for the PEPO NESHAP is in the documents titled *Economic Impact Analysis and Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which are in the docket for this rulemaking.

C. What are the cost impacts?

This final action will cumulatively cost (in 2024 dollars) approximately \$27.9 million in total capital costs and \$9.81 million per year in total annualized costs (including product recovery), based on the EPA's analysis of the final action described in sections III and IV of this preamble.¹⁰⁴ ¹⁰⁵ Besides the change to the number of facilities that the EPA estimates are subject to the PEPO NESHAP (see section IV.A of this preamble) and the Agency's revisions to reflect 2024 dollars and a 7.5 percent

interest rate, the changes in projected cost impacts since proposal result from the EPA's (1) decision to not finalize proposal to remove the TRE index value concept for continuous process vents in organic HAP service, (2) decision to not finalize the proposed fence line monitoring requirements, and (3) reevaluations related to EtO-specific standards covering process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in EtO service under CAA section 112(d)(6) instead of section 112(f)(2), based on comments received (see section IV.B.3 of this preamble). More information about the estimated cost of this final action for the PEPO NESHAP is in the document titled *Updated Impact Calculations and Technology Review for the PEPO Production Source Category—Final Rule*, which is in the docket for this rulemaking.

D. What are the economic impacts?

The EPA conducted an Economic Impacts Analysis (EIA) for this final action as documented in a document titled *Economic Impact Analysis*, which is in the docket for this action. The EPA estimates the present value (PV) of the estimated costs of this final rule, discounted at a 3 percent rate over the 2026 to 2045 period, at \$136 million with an estimated equivalent annualized value (EAV) of \$9.16 million without product recovery. With product recovery, the EPA estimates the PV at \$135 million with an estimated EAV of \$9.10 million. At a 7 percent discount rate, the PV of the final rule is \$108 million and the EAV is \$10.2 million without product recovery. With product recovery, the PV and EAV at a 7 percent discount rate are \$107 and \$10.1 million, respectively. The overall difference caused by product recovery is relatively minor, reflecting approximately a 0.72 and 0.67 percent decrease in cost estimates under 3 and 7 percent discount rates, respectively.

The EPA calculated the economic impacts on small entities as the percentage of total annualized costs incurred by affected ultimate parent owners to their revenues. This ratio provides a measure of the direct economic impact to ultimate parent owners of PEPO facilities while presuming no impact on consumers. The EPA estimates that the only small business impacted by the final action will incur total annualized costs of about 0.92 percent of its revenue both with and without product recovery. The Regulatory Flexibility Act (RFA) section later in this preamble and the EIA for this final rulemaking provide more explanation of these economic impacts.

¹⁰³ U.S. EPA (1997). Polyether Polyols Production: Basis and Purpose Document for Proposed Standards.

¹⁰⁴ Regarding product recovery, the LDAR control options for equipment leaks and heat exchange systems can help facilities prevent the loss of valuable process fluids by detecting leaks sooner. The EPA monetizes this benefit as recovery credits by multiplying VOC emissions reductions by a VOC credit of \$900 per ton. The EPA uses this recovery credit to represent the variety of chemicals used as reactants and produced at organic chemical manufacturing facilities.

¹⁰⁵ The annualized costs for the final rule include the costs of compliance, including those for monitoring, recordkeeping, and reporting. The EPA presents recordkeeping and reporting costs for the final rule separately in section VI.C of this preamble.

E. What are the benefits?

The EPA expects the emissions controls that this rule requires to reduce HAP emissions. HAP are airborne pollutants that can cause, or may cause, serious health effects. The EPA estimates that the amendments to the PEPO NESHAP, excluding the EtO emission standards and the new flare requirements, will reduce HAP emissions from PEPO sources by approximately 97 tpy. The EPA projects that the EtO emission standards will reduce EtO emissions from PEPO processes by approximately 12 tpy. The EPA also estimates that the amendments to the NESHAP will reduce excess emissions of HAP from flares in the PEPO Production source category by an additional 12 tpy.

Quantifying and monetizing the economic value of reducing the risk of cancer and noncancer effects is difficult due to the lack of a central estimate of cancer and noncancer risk and the lack of estimates of the value of an avoided case of cancer (fatal and nonfatal) and morbidity effects. Due to methodology and data limitations, the EPA did not attempt to monetize the health benefits of reductions in HAP emissions in this analysis.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders is available at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action, and the EPA therefore did not submit this action to the Office of Management and Budget (OMB) for review.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is not an Executive Order 14192 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The EPA submitted the information collection activities in this rule to OMB for approval under the PRA. OMB has assigned EPA ICR number 1811.14 to the information collection request (ICR) document that the EPA prepared. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The EPA is finalizing amendments to the PEPO NESHAP to add new monitoring and operational requirements for flares; add work practice standards for maintenance vents and equipment openings, storage vessel degassing, and planned routine maintenance of storage vessels; clarify regulatory provisions for vent control bypasses; add new monitoring requirements for PEPO pressure vessels; add new emission standards for PEPO surge control vessels and bottoms receivers; and add new emission standards for PEPO transfer racks. The EPA is also finalizing control requirements for EtO emissions from process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater in EtO service. In addition, the EPA is finalizing amendments to the PEPO NESHAP to add requirements for electronic reporting of performance test reports, flare management plans, and periodic reports and to make other minor clarifications and corrections. The EPA will collect this reporting information to ensure compliance with the PEPO NESHAP.

Respondents/affected entities:

Owners or operators of PEPO production facilities.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart PPP).

Estimated number of respondents: 23 (includes two new respondents over the next three years).

Frequency of response: Initially, semiannually, and annually.

Total estimated burden: 8,930 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: Average annual cost is \$5,610,000 (per year), which includes \$4,620,000 annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities in this final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The one small entity subject to the requirements of this

action is a small business. The Agency has determined that this small business may incur total annualized costs representing 0.9 percent of its revenue. Details of this analysis are presented in the document titled *Economic Impact Analysis*, which is in the docket for this action.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million (adjusted annually for inflation) or more (in 1995 dollars) as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The EPA estimates that costs involved in this action will not exceed \$187 million in 2024 dollars (\$100 million in 1995 dollars adjusted for inflation using the GDP implicit price deflator) or more in any one year.

F. Executive Order 13132: Federalism

This action 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.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. None of the facilities that the EPA has identified as being affected by this action are owned or operated by Tribal governments or located within Tribal lands. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866.

However, the EPA's *Policy on Children's Health* applies to this action. The EPA did not conduct a new analysis of children's environmental health for this final action. For details on children's health, please see the discussion in the proposal preamble. The EPA notes that this action finalizes

standards that are projected to reduce EtO emissions. Because EtO is a mutagenic HAP, emission reductions finalized in this action will be particularly beneficial to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. As discussed in the proposal preamble, the EPA conducted searches for the PEPO NESHAP through the Enhanced National Standards Systems Network Database managed by the American National Standards Institute (ANSI). The EPA also conducted a review of voluntary consensus standards (VCS) organizations and accessed and searched their databases. The EPA conducted searches for EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3B, 4, 18, 21, 22, and 25A of 40 CFR part 60, appendix A, and EPA Methods 301 and 320 of 40 CFR part 63, appendix A. During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's reference method, the EPA ordered a copy of the standard and reviewed it as a potential equivalent method. The EPA reviewed all potential standards to determine the practicality of the VCS for this rulemaking. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering, and policy equivalence to procedures in the EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS. The EPA did not identify any applicable VCS for EPA Methods 1A, 2A, 2D, 2F, 2G, 21, and 22.

The EPA incorporates by reference the following two VCS: ANSI/ASME PTC 19.10–1981—Part 10, “Flue and Exhaust Gas Analyses” as an acceptable alternative to EPA Method 3B (manual portion only) and ASTM D6420–18, “Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry” as an acceptable alternative to EPA Method

18. Although identified as VCS, the EPA is not incorporating by reference ASTM D6348–12, “Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy” as an acceptable alternative to EPA Method 320 because the EPA is not finalizing the proposal to eliminate the TRE index value concept in the PEPO NESHAP (which would have required use of EPA Method 320).

ANSI/ASME PTC 19.10–1981—Part 10, “Flue and Exhaust Gas Analyses” quantitatively determines the gaseous constituents of exhausts including oxygen, CO₂, CO, nitrogen, SO₂, sulfur trioxide, nitric oxide, nitrogen dioxide, hydrogen sulfide, and hydrocarbons. This method incorporates both manual and instrumental methodologies for the determination of oxygen content. The manual method segment of the oxygen determination is performed through the absorption of oxygen. This method is available at the ANSI, 1899 L Street NW, 11th Floor, Washington, DC 20036 and the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016–5990; telephone number: 1–800–843–5990; and email address: customercare@asme.org. See <https://www.ansi.org> and <https://www.asme.org>. The standard is available to everyone at a cost determined by ANSI/ASME (\$88). ANSI/ASME also offer memberships or subscriptions for reduced costs. The cost of obtaining these methods is not a significant financial burden, making the methods reasonably available.

ASTM D6420–18, “Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry” uses a direct interface gas chromatograph/mass spectrometer to measure 36 VOC and provide an on-site analysis of extracted, unconditioned, and unsaturated (at the instrument) gas samples from stationary sources. In this action, the EPA is finalizing ASTM D6420–18 as an alternative to EPA Method 18 with the following caveats:

- Affected sources must know the target compounds, and ASTM D6420–18 lists them as measurable;
- Affected sources cannot use ASTM D6420–18 for methane and ethane because the atomic mass is less than 35; and
- Affected sources cannot use ASTM D6420–18 as a total VOC method.

ASTM D6420–18 is available at ASTM International, 1850 M Street NW, Suite 1030, Washington, DC 20036. See <https://www.astm.org/>. This standard is

available to everyone at a cost determined by the ASTM (\$63). The ASTM also offers memberships or subscriptions that allow unlimited access to their methods. The cost of obtaining these methods is not a significant financial burden, making the methods reasonably available to stakeholders.

While the EPA identified 11 other VCS as being potentially applicable, the Agency decided not to use them because these methods are impractical as alternatives due to the lack of equivalency, documentation, and validation date and other important technical and policy considerations. The EPA has documented these search and review results in the memorandum *Voluntary Consensus Standard Results for National Emission Standards for Hazardous Air Pollutants: Polyether Polyols Production Industry Residual Risk and Technology Review*.¹⁰⁶

The EPA is finalizing amendments to 40 CFR part 63, subpart A, to address incorporations by reference. The EPA is amending 40 CFR 63.14 to reflect the ANSI and ASTM methods incorporated by reference. Under subpart A—General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule or any amendments.¹⁰⁷

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Lee Zeldin,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

¹⁰⁶ Document ID No. EPA–HQ–OAR–2023–0282–0043.

¹⁰⁷ 40 CFR 63.7(f) and 40 CFR 63.8(f).

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart A—General Provisions

■ 2. Amend § 63.14 by revising paragraphs (f)(1) and (i)(96) to read as follows:

§ 63.14 Incorporations by reference.

(f) * * *

(1) ANSI/ASME PTC 19.10—1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981; §§ 63.116(c) and (h); 63.128(a); 63.145(i); 63.309(k); 63.365(b); 63.457(k); 63.490(g); 63.772(e) and (h); 63.865(b); 63.997(e); 63.1282(d) and (g); 63.1426(c); 63.1450(a), (b), (d), (e), (f), and (g); 63.1625(b); table 5 to subpart EEEE; §§ 63.3166(a); 63.3360(e); 63.3545(a); 63.3555(a); 63.4166(a); 63.4362(a); 63.4766(a); 63.4965(a); 63.5160(d); table 4 to subpart UUUU; tables 5 and 17 to subpart XXXX; table 3 to subpart YYYY; table 5 to subpart AAAA; § 63.7322(b); table 5 to subpart DDDDD; §§ 63.7822(b); 63.7824(e); 63.7825(b); 63.8000(d); table 4 to subpart JJJJ; table 4 to subpart KKKK; §§ 63.9307(c); 63.9323(a); 63.9621(b) and (c); table 4 to subpart SSSS; tables 4 and 5 of subpart UUUUU; table 1 to subpart ZZZZ; §§ 63.11148(e); 63.11155(e); 63.11162(f); 63.11163(g); table 4 to subpart JJJJJ; §§ 63.11410(j); 63.11551(c); 63.11646(a); 63.11945(d).

(i) * * *

(96) ASTM D6420—18, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, approved November 1, 2018, IBR approved for §§ 63.101(b); 63.115(g); 63.116(c); 63.126(d); 63.128(a); 63.139(c); 63.145(d) and (i); 63.150(g); 63.180(d); 63.305(c); 63.482(b); 63.485(t); 63.488(b); 63.490(c) and (e); 63.496(b); 63.500(c); 63.501(a); 63.502(j); 63.503(a) and (g); 63.525(a) and (e); 63.987(b); 63.997(e); 63.1423(b); 63.1426(c); 63.2354(b); table 5 to subpart EEEE; §§ 63.2450(j); 63.8000(d).

■ 2a. Effective April 28, 2026, amend § 63.14 by revising paragraph (f)(1) to read as follows:

(f) * * *

(1) ANSI/ASME PTC 19.10—1981, Flue and Exhaust Gas Analyses [Part 10,

Instruments and Apparatus], issued August 31, 1981; §§ 63.116(c) and (h); 63.128(a); 63.145(i); 63.309(k); 63.365(b); 63.457(k); 63.490(g); 63.772(e) and (h); 63.865(b); 63.997(e); 63.1282(d) and (g); 63.1426(c); 63.1450(a), (b), (d), (e), (f), and (g); 63.1625(b); table 5 to subpart EEEE; §§ 63.3166(a); 63.3360(e); 63.3545(a); 63.3555(a); 63.4166(a); 63.4362(a); 63.4766(a); 63.4965(a); 63.5160(d); table 4 to subpart UUUU; tables 5 and 17 to subpart XXXX; table 3 to subpart YYYY; table 5 to subpart AAAA; § 63.7322(b); table 5 to subpart DDDDD; §§ 63.7822(b); 63.7824(e); 63.7825(b); 63.8000(d); table 4 to subpart JJJJ; table 4 to subpart KKKK; §§ 63.9307(c); 63.9323(a); 63.9621(b) and (c); table 4 to subpart SSSS; table 5 of subpart UUUUU; table 1 to subpart ZZZZ; §§ 63.11148(e); 63.11155(e); 63.11162(f); 63.11163(g); table 4 to subpart JJJJJ; §§ 63.11410(j); 63.11551(c); 63.11646(a); 63.11945(d).

Subpart U—National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

■ 3. Amend § 63.506 by revising paragraph (e)(6)(ii) and adding paragraph (e)(6)(iii) to read as follows:

§ 63.506 General recordkeeping and reporting provisions.

(e) * * *

(6) * * *

(ii) If none of the compliance exceptions in paragraphs (e)(6)(iii) through (ix) or (xiii) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that there were no compliance exceptions as described in this paragraph for the 6-month period covered by that report and that none of the activities specified in paragraphs (e)(6)(iii) through (ix) or (xiii) of this section occurred during the 6-month period covered by that report.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.484 through 63.501 for any emission point, Periodic Reports shall include:

(A) All information specified in § 63.122(a)(4) for storage vessels, § 63.117(a)(3) and 63.118(f) and 63.485(s)(5) for continuous front-end process vents, § 63.492 for batch front-end process vents and aggregate batch vent streams, § 63.499 for back-end process operations, § 63.104(f)(2) for heat exchange systems, and § 63.146(c) through (g) for process wastewater.

(B) The daily average values or batch cycle daily average values of monitored parameters for all excursions, as defined in § 63.505(g) and (h). For excursions caused by lack of monitoring data, the start date and time and duration (in hours) of periods when monitoring data were not collected shall be specified.

(C) For each affected source as described in § 63.480, beginning no later than the compliance dates specified in § 63.481(n), for each excursion that is not an excused excursion, the report must include the date of the excursion, a list of the affected sources or equipment, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, the cause of the excursion (including unknown cause, if applicable), as applicable, and the corrective action taken.

(D) The information in paragraphs (e)(6)(iii)(D)(1) through (5) of this section, as applicable:

(1) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section;

(2) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. This notification may be submitted at any time.

(3) Notification if one or more emission points (other than equipment leaks) or one or more EPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(3)(i) through (ii) of this section.

(i) A description of the addition to the affected source; and

(ii) Notification of the group status of the additional emission point or all emission points in the EPPU.

(4) Notification if a standard operating procedure, as defined in § 63.500(a)(2), is changed and the change has the potential for increasing the concentration of carbon disulfide in the crumb dryer exhaust. This notification shall also include a summary of the test results of the carbon disulfide concentration resulting from the new standard operating procedure. The results of the performance test must be

submitted according to paragraph (i) of this section by the date the Periodic Report is submitted.

(5) For process wastewater streams sent for treatment pursuant to § 63.132(g), reports of changes in the identity of the treatment facility or transferee.

(E) The start date, start time, duration in hours, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.483(a), including actions taken to correct a malfunction.

* * * * *

Subpart PPP—National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production

■ 4. Amend § 63.1420 by revising paragraph (d)(3), adding paragraph (d)(4), and revising paragraph (e)(3) introductory text to read as follows:

§ 63.1420 Applicability and designation of affected sources.

* * * * *

(d) * * *

(3) Except as specified in paragraph (d)(4) of this section, reactions or processing that occur after the epoxide polymerization is complete and after all catalyst removal steps, if any, are complete.

(4) Beginning no later than the compliance dates specified in § 63.1422(h), replace paragraph (d)(3) of this section with “Reactions or processing that occur after the epoxide polymerization is complete, and after all catalyst removal, solvent removal, purification, drying, and solids handling steps, if any, are complete. If, prior to March 18, 2026, an owner or operator has submitted a notification of compliance status report to its permitting authority and made a determination that the provisions of subpart FFFF of this part are applicable to certain processes that occur after the epoxide polymerization and catalyst removal steps are complete, the owner or operator may continue to comply with subpart FFFF of this part to satisfy the requirements of this subpart for those processes.”

(e) * * *

(3) *Annual applicability determination for non-PMPUs that have produced a polyether polyol.* Once per

year beginning June 1, 2004, the owner or operator of each flexible operation unit that is not designated as a PMPU, but that has produced a polyether polyol at any time in the preceding 5-year period or since the date that the unit began production of any product, whichever is shorter, shall perform the evaluation described in paragraphs (e)(3)(i) through (iii) of this section. However, an owner or operator that does not intend to produce any polyether polyol product in the future, in accordance with paragraph (e)(9) of this section, is not required to perform the evaluation described in paragraphs (e)(3)(i) through (iii) of this section.

* * * * *

■ 5. Amend § 63.1421 by revising paragraph (c) introductory text and adding paragraph (c)(5) to read as follows:

§ 63.1421 Implementation and enforcement.

* * * * *

(c) The authorities that cannot be delegated to state, local, or Tribal agencies are as specified in paragraphs (c)(1) through (5) of this section.

* * * * *

(5) Approval of an alternative to any electronic reporting to the U.S. EPA required by this subpart.

■ 6. Amend § 63.1422 by revising paragraphs (b), (c), paragraph (d) introductory text, paragraphs (d)(5), and adding paragraph (h) to read as follows:

§ 63.1422 Compliance dates and relationship of this rule to existing applicable rules.

* * * * *

(b) Except as specified in paragraph (h) of this section, new affected sources that commence construction or reconstruction after September 4, 1997 shall be in compliance with this subpart (except § 63.1434(c)(3)) upon initial start-up or by June 1, 1999, whichever is later. New affected sources that commenced construction or reconstruction after September 4, 1997, but on or before January 9, 2012, shall be in compliance with the pressure relief device monitoring requirements of § 63.1434(c)(3) by March 27, 2017. New affected sources that commence construction or reconstruction after January 9, 2012, shall be in compliance with the pressure relief device monitoring requirements of § 63.1434(c)(3) upon initial start-up or by March 27, 2014, whichever is later.

(c) Except as specified in paragraph (h) of this section, existing affected sources shall be in compliance with this subpart (except for § 63.1434 for which compliance is covered by paragraph (d)

of this section) no later than June 1, 2002, as provided in § 63.6(c), unless an extension has been granted as specified in paragraph (e) of this section.

(d) Except as provided for in paragraphs (d)(1) through (6), and (h) of this section, existing affected sources shall be in compliance with § 63.1434 no later than December 1, 1999, unless an extension has been granted as specified in paragraph (e) of this section.

* * * * *

(5) Except as specified in § 63.1434(a)(7), compliance with the surge control vessel and bottoms receiver provisions of § 63.170 shall occur no later than June 1, 2002.

* * * * *

(h) All affected sources that commenced construction or reconstruction on or before December 27, 2024, must be in compliance with the provisions listed in paragraphs (h)(1) through (8) of this section upon initial start-up or on March 18, 2029, whichever is later. All affected sources that commenced construction or reconstruction after December 27, 2024, must be in compliance with the provisions listed in paragraphs (h)(1) through (8) of this section upon initial start-up, or on March 18, 2026, whichever is later.

(1) The provisions specified in § 63.1420(d)(4), the definition of “in ethylene oxide service” in §§ 63.1423, 63.1436, 63.1437(a) and (c)(4), and 63.1439(e)(6)(iii)(A) through (C).

(2) For process vents, the provisions specified in §§ 63.1425(f)(11), (g), and (h); 63.1426(a)(2), (b)(7), (d)(1)(iv), (e)(2)(v) and (vi), and (g), 63.1427(a)(2)(iii), 63.1428(c)(2), (d)(3), and (e)(2); 63.1429(a)(8) and (9) and (c)(3); 63.1430(d)(6) and (h)(7); table 5 to this subpart, for carbon adsorber, for outlet HAP or TOC concentration, adsorbent replacement, and breakthrough, third column; table 5 to this subpart, for all combustion, recovery, or recapture devices, for diversion to the atmosphere from a combustion, recovery, or recapture device or monthly inspections of sealed valves, item 3 in the third column; table 6 to this subpart for carbon adsorber, for outlet HAP or TOC concentration, adsorbent replacement, and breakthrough, third column; table 6 to this subpart for all combustion, recovery, or recapture devices, for diversion to the atmosphere from a combustion, recovery, or recapture device or monthly inspections of sealed valves, item 3 in the third column.

(3) For storage vessels, the provisions specified in § 63.1432(r) through (w) and table 3 to this subpart.

(4) For wastewater, the provisions specified in § 63.1433(a)(21) and (23).

(5) For equipment leaks, the provisions specified in § 63.1434(a)(2), (3), and (6).

(6) For surge control vessels and bottoms receivers, the provisions specified in § 63.1434(a)(7).

(7) For transfer racks, the provisions specified in § 63.1434(i).

(8) For heat exchange systems, the provisions specified in § 63.1435(g) and (i).

* * * * *

■ 7. Revise § 63.1423 to read as follows:

§ 63.1423 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in subparts A and F of this part as specified after each term:

Act (subpart A)
 Administrator (subpart A)
 Automated monitoring and recording system (subpart F)
 Boiler (subpart F)
 Bottoms receiver (subpart F)
 Breakthrough (subpart F)
 By-product (subpart F)
 Car-seal (subpart F)
 Closed vent system (subpart F)
 Combustion device (subpart F)
 Commenced (subpart A)
 Compliance date (subpart A)
 Continuous emission monitoring system (subpart A)
 Continuous monitoring system (subpart A)
 Emission standard (subpart A)
 EPA (subpart A)
 Equipment (subpart F)
 Flow indicator (subpart F)
 Fuel gas (subpart F)
 Fuel gas system (subpart F)
 Hard-piping (subpart F)
 Impurity (subpart F)
 Incinerator (subpart F)
 Loading rack (subpart F)
 Major source (subpart A)
 Malfunction (subpart A)
 Oil-water separator or organic-water separator (subpart F)
 Open-ended valve or line (subpart F)
 Operating permit (subpart F)
 Organic monitoring device (subpart F)
 Owner or operator (subpart A)
 Performance evaluation (subpart A)
 Performance test (subpart A)
 Permitting authority (subpart A)
 Plant site (subpart F)
 Potential to emit (subpart A)
 Pressure release (subpart F)
 Pressure relief device or valve (subpart F)
 Pressure vessel (subpart F)
 Primary fuel (subpart F)
 Process heater (subpart F)
 Process unit shutdown (subpart F)
 Reactor (subpart F)
 Recapture device (subpart F)
 Research and development facility (subpart F)

Responsible official (subpart A)

Run (subpart A)

Secondary fuel (subpart F)

Sensor (subpart F)

Specific gravity monitoring device (subpart F)

State (subpart A)

Surge control vessel (subpart F)

Temperature monitoring device (subpart F)

Test method (subpart A)

Total resource effectiveness index value (subpart F)

Treatment process (subpart F)

Visible emission (subpart A)

(b) All other terms used in this subpart shall have the meaning given them in this section.

Ancillary activities means boilers and incinerators (not used to comply with the emission limits of this subpart PPP), chillers and refrigeration systems, and other equipment and activities that are not directly involved (*i.e.*, they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a product or isolated intermediate.

Annual average concentration, as used in conjunction with the wastewater provisions, means the flow-weighted annual average concentration and is determined by the procedures in § 63.144(b), except as provided in § 63.1433(a)(2).

Annual average flow rate, as used in conjunction with the wastewater provisions, is determined by the procedures in § 63.144(c).

Batch cycle means the step or steps, from start to finish, that occur in a batch unit operation.

Batch unit operation means a unit operation involving intermittent or discontinuous feed into equipment, and, in general, involves the emptying of equipment after the batch cycle ceases and prior to beginning a new batch cycle. Mass, temperature, concentration and other properties of the process may vary with time. Addition of raw material and withdrawal of product do not simultaneously occur in a batch unit operation.

Catalyst extraction means the removal of the catalyst using either solvent or physical extraction method.

Construction means the on-site fabrication, erection, or installation of an affected source. Construction also means the on-site fabrication, erection, or installation of a process unit or a combination of process units which subsequently becomes an affected source or part of an affected source due to a change in primary product.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once during

approximately equal intervals of 15 minutes and recorded at the frequency specified in § 63.1439(d).

Continuous recorder is defined in § 63.101, except that when the definition in § 63.101 reads “or records 15-minute or more frequent block average values,” the phrase “or records 1-hour or more frequent block average values” shall apply for purposes of this subpart.

Continuous unit operation means a unit operation where the inputs and outputs flow continuously. Continuous unit operations typically approach steady-state conditions. Continuous unit operations typically involve the simultaneous addition of raw material and withdrawal of the product.

Control technique means any equipment or process control used for capturing, recovering, or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, adsorbers, boilers, condensers, flares, incinerators, process heaters, and scrubbers, or any combination thereof. Process control includes extended cookout (as defined in this section). Condensers operating as reflux condensers that are necessary for processing, such as liquid level control, temperature control, or distillation operation, shall be considered inherently part of the process and will not be considered control techniques.

Emission point means an individual process vent, storage vessel, wastewater stream, or equipment leak.

Epoxide means a chemical compound consisting of a three-membered cyclic ether. Only emissions of epoxides listed in table 4 of this subpart (*i.e.*, ethylene oxide, propylene oxide, butylene oxide, and epichlorohydrin) are regulated by the provisions of this subpart.

Equipment leak means emissions of organic HAP from a connector, pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, surge control vessel, bottoms receiver, or instrumentation system in organic HAP service.

Extended Cookout (ECO) means a control technique that reduces the amount of unreacted epoxides in the reactor. This is accomplished by allowing the product to react for a longer time period, thereby having less unreacted epoxides and reducing epoxides emissions that may have otherwise occurred.

Flexible operation unit means a process unit that manufactures different chemical products by periodically alternating raw materials fed to the process unit or operating conditions at the process unit. These units are also

referred to as campaign plants or blocked operations.

Group 1 combination of batch process vents means, before March 18, 2029, a collection of process vents in a PMPU from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product that meet all of the following conditions:

(1) Has annual nonepoxide organic HAP emissions, determined in accordance with § 63.1428(b), of 11,800 kilograms per year (kg/yr) or greater, and

(2) Has a cutoff flow rate, determined in accordance with § 63.1428(e), that is greater than or equal to the annual average flow rate, determined in accordance with § 63.1428(d).

No later than March 18, 2029, *Group 1 combination of batch process vents* means, a collection of process vents in a PMPU from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product that has annual nonepoxide organic HAP emissions, determined in accordance with § 63.1428(b), of 4,536 kg/yr (10,000 pounds per year (lb/yr)) or greater.

Group 2 combination of batch process vents means a collection of process vents in a PMPU from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product that is not classified as a Group 1 combination of batch process vents.

Group 1 continuous process vent means a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product that meets all of the following conditions:

(1) Has a flow rate greater than or equal to 0.005 standard cubic meters per minute,

(2) Has a total organic HAP concentration greater than or equal to 50 parts per million by volume, and

(3) Has a total resource effectiveness index value, calculated in accordance with § 63.1428(h)(1), less than or equal to 1.0.

Group 2 continuous process vent means a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product that is not classified as a Group 1 continuous process vent.

Group 1 storage vessel means a storage vessel that meets the applicability criteria specified in table 3 of this subpart.

Group 2 storage vessel means a storage vessel that does not fall within

the definition of a Group 1 storage vessel.

Group 1 transfer rack means a transfer rack that loads material with a maximum true vapor pressure greater than or equal to 0.5 pounds per square inch absolute (3.45 kilopascal).

Group 2 transfer rack means a transfer rack that does not fall within the definition of a Group 1 transfer rack.

Group 1 wastewater stream means a process wastewater stream at an existing or new affected source that meets the criteria for Group 1 status in § 63.132(c), with the exceptions listed in § 63.1433(a)(2) for the purposes of this subpart (*i.e.*, for organic HAP listed on table 4 of this subpart only).

Group 2 wastewater stream means any process wastewater stream at an existing affected source or new affected source that does not meet the definition (in this section) of a Group 1 wastewater stream.

Heat exchange system means a device or collection of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (*i.e.*, non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system) or a once-through system (*e.g.*, river or pond water). For closed-loop recirculation systems, the heat exchange system consists of a cooling tower, all PMPU heat exchangers that are in organic HAP service and serviced by that cooling tower, and all water lines to and from these process unit heat exchangers. For once-through systems, the heat exchange system consists of all heat exchangers that are in organic HAP service servicing an individual PMPU and all water lines to and from these heat exchangers. Sample coolers or pump seal coolers are not considered heat exchangers for the purpose of this definition and are not part of the heat exchange system. Intentional direct contact with process fluids results in the formation of a wastewater.

In ethylene oxide service means the following:

(1) For equipment leaks, any equipment that contains or contacts a fluid (liquid or gas) that is at least 1.0 percent by weight of ethylene oxide. If information exists that suggests ethylene oxide could be present in equipment, the equipment is considered to be “in ethylene oxide service” unless the procedures specified in § 63.109 are performed to demonstrate that the equipment does not meet the definition of being “in ethylene oxide service.” Examples of information that could suggest ethylene oxide could be present in equipment, include calculations based on safety data sheets, material

balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(2) For heat exchange systems, any heat exchange system in a process that cools process fluids (liquid or gas) that are 1.0 percent or greater by weight of ethylene oxide. If knowledge exists that suggests ethylene oxide could be present in a heat exchange system, then the heat exchange system is considered to be “in ethylene oxide service” unless the procedures specified in § 63.109 are performed to demonstrate that the heat exchange system does not meet the definition of being “in ethylene oxide service.” Examples of information that could suggest ethylene oxide could be present in a heat exchange system, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(3) For process vents, each Group 1 and Group 2 process vent in a process that, when uncontrolled, contains a concentration of greater than or equal to 1 ppmv undiluted ethylene oxide, and when combined, the sum of all these process vents within the process would emit uncontrolled, ethylene oxide emissions greater than or equal to 100 lb/yr (45.4 kg/yr). If information exists that suggests ethylene oxide could be present in a Group 1 or Group 2 process vent, then the Group 1 or Group 2 process vent is considered to be “in ethylene oxide service” unless an analysis is performed as specified in § 63.109 to demonstrate that the Group 1 or Group 2 process vent does not meet the definition of being “in ethylene oxide service.” Examples of information that could suggest ethylene oxide could be present in a Group 1 or Group 2 process vent, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(4) For storage vessels, storage vessels of any capacity and vapor pressure storing a liquid that is at least 1.0 percent by weight of ethylene oxide. If knowledge exists that suggests ethylene oxide could be present in a storage vessel, then the storage vessel is considered to be “in ethylene oxide service” unless the procedures specified in § 63.109 are performed to demonstrate that the storage vessel does not meet the definition of being “in ethylene oxide service.” The exemption for “vessels storing organic liquids that contain organic hazardous air pollutants only as impurities” listed in the

definition of “storage vessel” in this section does not apply for storage vessels that may be in ethylene oxide service. Examples of information that could suggest ethylene oxide could be present in a storage vessel, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(5) For wastewater streams, any wastewater stream that contains total annual average concentration of ethylene oxide greater than or equal to 10 parts per million by weight at any flow rate. If knowledge exists that suggests ethylene oxide could be present in a wastewater stream, then the wastewater stream is considered to be “in ethylene oxide service” unless sampling and analysis is performed as specified in § 63.109 to demonstrate that the wastewater stream does not meet the definition of being “in ethylene oxide service.” Examples of information that could suggest ethylene oxide could be present in a wastewater stream, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(6) For paragraphs (1) through (5) of this definition, the following sentence in § 63.109 does not apply: “This section applies beginning no later than the compliance dates specified in § 63.100(k)(11).” Instead, § 63.109 applies beginning no later than the compliance dates specified in § 63.1422(h). Also, an owner or operator of an existing source is not required to comply with § 63.109(a)(1) through (6) for an initial measurement or initial performance test if a previously conducted measurement or performance test was completed on or after March 18, 2021 and the requirements specified in § 63.109(a)(7)(i) through (iii) are met.

In organic hazardous air pollutant service or in organic HAP service means that a piece of equipment or heat exchange system either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP (as defined in this section), as determined according to the provisions of § 63.180(d). The provisions of § 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service. For purposes of the definition of “heat exchange system,” the term “equipment” in § 63.180(d) includes heat exchange systems. Beginning March 18, 2029, any piece of equipment or heat exchange system that is in

ethylene oxide service is also in organic HAP service.

Initial start-up means the first time a new or reconstructed affected source begins production, or, for equipment added or changed as described in § 63.1420(g), the first time the equipment is put into operation to produce a polyether polyol. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups of an affected source or portion thereof following malfunctions or shutdowns or following changes in product for flexible operation units. Further, for purposes of § 63.1422, initial start-up does not include subsequent start-ups of affected sources or portions thereof following malfunctions or process unit shutdowns.

Maintenance wastewater is defined in § 63.101, except that the term “polyether polyol manufacturing process unit” shall apply whenever the term “chemical manufacturing process unit” is used. Further, the generation of wastewater from the routine rinsing or washing of equipment in batch operation between batches is not maintenance wastewater, but is considered to be process wastewater, for the purposes of this subpart.

Make or modify the product means to produce the polyether polyol by polymerization of epoxides or other cyclic ethers with compounds having one or more reactive hydrogens, and to incorporate additives (e.g., preservatives, antioxidants, or diluents) in order to maintain the quality of the finished products before shipping. Making and modifying the product for this regulation does not include grafting, polymerizing the polyol, or reacting it with compounds other than EO or PO.

Maximum true vapor pressure is defined in § 63.101, except before March 18, 2029, the terms “transfer” and “transferred” do not apply for the purposes of this subpart. On and after March 18, 2029, the terms “transfer” and “transferred” do apply for the purposes of this subpart.

New process unit means a process unit for which the construction or reconstruction commenced after September 4, 1997.

On-site or on site means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, a location within the plant site where the affected source is located. On-site storage of records includes, but is not limited to, a location at the affected source or PMPU to which the records pertain or a location elsewhere at the

plant site where the affected source is located.

Operating day refers to the 24-hour period defined by the owner or operator in the Notification of Compliance Status required by § 63.1439(e)(5). That 24-hour period may be from midnight to midnight or another 24-hour period. The operating day is the 24-hour period for which daily average monitoring values are determined.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in table 4 of this subpart, or any other chemical which:

- (1) Is knowingly produced or introduced into the manufacturing process other than as an impurity; and
- (2) Is listed in table 2 of 40 CFR part 63, subpart F in the HON.

Polyether polyol means a compound formed through the polymerization of E.O. or PO or other cyclic ethers with compounds having one or more reactive hydrogens (i.e., a hydrogen atom bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers (i.e., compounds with two or more ether bonds). This definition of *polyether polyol* excludes cellulose ethers (such as methyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, hydroxy ethyl cellulose, and hydroxypropyl methyl cellulose) and materials regulated under 40 CFR part 63, subparts F, G, and H (the HON), such as glycols and glycol ethers.

Polyether polyol manufacturing process unit (PMPU) means a process unit that manufactures a polyether polyol as its primary product, or a process unit designated as a polyether polyol manufacturing unit in accordance with § 63.1420(e)(2). A polyether polyol manufacturing process unit consists of more than one unit operation. This collection of equipment includes purification systems, reactors and their associated product separators and recovery devices, distillation units and their associated distillate receivers and recovery devices, other associated unit operations, storage vessels (including pressure vessels), surge control vessels, bottoms receivers, product transfer racks, connected ducts and piping, combustion, recovery, or recapture devices or systems, and the equipment (i.e., all pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are associated with the PMPU) that are subject to the equipment leak provisions as specified in § 63.1434. Ancillary activities are not considered a process or part of any process. Quality assurance/quality

control laboratories are not considered part of the process.

Pressure decay curve is the graph of the reactor pressure versus time from the point when epoxide feed is stopped until the reactor pressure is constant, indicating that most of the epoxide has reacted out of the vapor and liquid phases. This curve shall be determined with no leaks or vents from the reactor.

Primary product is defined in and determined by the procedures specified in § 63.1420(e).

Process unit means a collection of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture a product.

Process vent means a point of emission from a unit operation having a gaseous stream that is discharged to the atmosphere either directly or after passing through one or more combustion, recovery, or recapture devices. Before March 18, 2029, a process vent from a continuous unit operation is a gaseous emission stream containing more than 0.005 weight-percent total organic HAP. On and after March 18, 2029, a process vent from a continuous unit operation is a gaseous emission stream containing more than 0.005 weight-percent total organic HAP or is a gaseous emissions stream that contains a concentration of greater than or equal to 1 parts per million by volume (ppmv) undiluted ethylene oxide and that is part of a collection of vents from a process that when combined contain greater than or equal to 100 lb/yr (45.4 kg/yr) ethylene oxide. Before March 18, 2029, a process vent from a batch unit operation is a gaseous emission stream containing more than 225 kg/yr (500 lb/yr) of organic HAP emissions. On and after March 18, 2029, a process vent from a batch unit operation is a gaseous emission stream containing more than 225 kg/yr (500 lb/yr) of organic HAP emissions or is a gaseous emissions stream that contains a concentration of greater than or equal to 1 ppmv undiluted ethylene oxide and that is part of a collection of vents from a process that when combined contain greater than or equal to 100 lb/yr (45.4 kg/yr) ethylene oxide. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the PMPU. Process vents exclude pressure relief device discharges, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.1434. A gaseous emission stream is no longer considered to be a process vent after the stream has been controlled and monitored in accordance with the applicable provisions of this subpart.

Process wastewater means wastewater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. Examples are product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; equipment washes between batches in a batch process; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

Product means a compound or material which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Product class means a group of polyether polyols with a similar pressure decay curve (or faster pressure decay curves) that are manufactured within a given set of operating conditions representing the decline in pressure versus time. All products within a product class shall have an essentially similar pressure decay curve, and operate within a given set of operating conditions. These operating conditions are: a minimum reaction temperature; the number of -OH groups in the polyol; a minimum catalyst concentration; the type of catalyst (e.g., self-catalyzed, base catalyst, or acid catalyst); the epoxide ratio, or a range for that ratio; and the reaction conditions of the system (e.g., the size of the reactor, or the size of the batch).

Reactor liquid means the compound or material made in the reactor, even though the substance may be transferred to another vessel. This material may require further modifications before becoming a final product, in which case the reactor liquid is classified as an "intermediate." This material may be complete at this stage, in which case the reactor liquid is classified as a "product."

Reconstruction means the replacement of components of an affected source or of a previously unaffected stationary source that becomes an affected source as a result of the replacement, to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
- (2) It is technologically and economically feasible for the

reconstructed source to meet the provisions of this subpart.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers (except reflux condensers), oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin film evaporation units. For the purposes of the monitoring, recordkeeping, or reporting requirements of this subpart, recapture devices are considered to be recovery devices.

Residual is defined in § 63.101, except that when the definition in § 63.101 uses the term "table 9 compounds," the term "organic HAP listed in table 9 to subpart G of this part" shall apply, for the purposes of this subpart.

Shutdown means the cessation of operation of an affected source, a PMPU within an affected source, a waste management unit or unit operation within an affected source, equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. The purposes for a shutdown may include, but are not limited to, periodic maintenance, replacement of equipment, or equipment repairs. Shutdown does not include the normal periods between batch cycles. For continuous unit operations, shutdown includes transitional conditions due to changes in product for flexible operation units. For batch unit operations, shutdown does not include transitional conditions due to changes in product for flexible operation units. For purposes of the wastewater provisions, shutdown does not include the routine rinsing or washing of equipment between batch cycles.

Start-up means the setting into operation of an affected source, a PMPU within the affected source, a waste management unit or unit operation within an affected source, equipment required or used to comply with this subpart, or a storage vessel after emptying and degassing. For all processes, start-up includes initial start-up and operation solely for testing equipment. Start-up does not include the recharging of batch unit operations. For continuous unit operations, start-up includes transitional conditions due to changes in product for flexible operation units. For batch unit operations, start-up does not include

transitional conditions due to changes in product for flexible operation units.

Steady-state conditions means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values may occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP. Storage vessels do not include:

- (1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;
- (2) [Reserved]
- (3) Except for storage vessels in ethylene oxide service, vessels with capacities smaller than 38 cubic meters;
- (4) Except for storage vessels in ethylene oxide service, vessels and equipment storing and/or handling material that contains no organic HAP, or organic HAP as impurities only;
- (5) Surge control vessels and bottoms receiver tanks;
- (6) Wastewater storage tanks; and
- (7) Storage vessels assigned to another process unit regulated under another subpart of part.

Total organic compounds (TOC) are those compounds, excluding methane and ethane, measured according to the procedures of Method 18 or Method 25A of appendices A–6 and A–7 to part 60 of this chapter, or ASTM D6420–18 (Incorporated by reference, see § 63.14) as specified in this subpart.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to a PMPU according to the procedures specified in § 63.1420(f)(1) through (5) (where the term “storage rack” is substituted with “transfer rack”; and the date “June 1, 1999” is substituted with “March 18, 2026”) and are used to fill tank trucks and/or railcars with organic liquids that contain one or more of organic HAP. A transfer rack also includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves.

Unit operation means one or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one or more process streams. Unit operations include, but are not limited to, reactors, distillation units, extraction columns, absorbers, decanters, condensers, and filtration equipment.

Vent stream, as used in reference to process vents, means the emissions from a process vent.

Waste management unit is defined in § 63.101, except that when the definition in § 63.101 uses the term “chemical manufacturing process unit,”

the term “PMPU” shall apply for the purposes of this subpart.

Wastewater means water that:

- (1) Contains either
 - (i) An annual average concentration of organic HAP listed in table 4 of this subpart of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater, or
 - (ii) An annual average concentration of organic HAP listed on table 4 to this subpart of at least 10,000 parts per million by weight at any flow rate; or
 - (iii) Beginning March 18, 2029, a total annual average concentration of ethylene oxide greater than or equal to 10 parts per million by weight at any flow rate; and that
- (2) Is discarded from a PMPU that is part of an affected source. Wastewater is process wastewater or maintenance wastewater.

■ 8. Amend § 63.1425 by revising paragraph (a), introductory text of paragraphs (b) and (f), and adding paragraphs (f)(11) through (15), (g), and (h) to read as follows:

§ 63.1425 Process vent control requirements.

(a) *Applicability of process vent control requirements.* For each process vent at an affected source, the owner or operator shall comply with the provisions of this section. Owners and operators of all affected sources using epoxides in the production of polyether polyols are subject to the requirements of paragraph (b) of this section. Owners and operators subject to paragraph (b) of this section are also subject to paragraph (g) of this section for process vents in ethylene oxide service. Owners or operators are also subject to the requirements of paragraph (c) of this section only if epoxides are used in the production of polyether polyols and organic HAP are used in catalyst extraction. Owners and operators subject to paragraph (b), (c), (d), or (g) of this section are also subject to paragraph (h) of this section if the owner or operator chooses to designate a process vent as a maintenance vent as specified in paragraph (h) of this section. The owner or operator of an affected source where polyether polyol products are produced using tetrahydrofuran shall comply with paragraph (f) of this section.

(b) *Requirements for epoxide emissions.* The owner or operator of an

affected source where polyether polyol products are produced using epoxides shall reduce epoxide emissions from process vents from batch unit operations and continuous unit operations within each PMPU in accordance with either paragraph (b)(1) or (2) of this section and if applicable, paragraph (g) of this section.

* * * * *

(f) *Requirements for process vents at PMPUs that produce polyether polyol products using tetrahydrofuran.* For each process vent in a PMPU that uses tetrahydrofuran (THF) to produce one or more polyether polyol products that is, or is part of, an affected source, the owner or operator shall comply with the HON process vent requirements in §§ 63.113 through 63.118, except as provided for in paragraphs (f)(1) through (10) of this section, and, beginning March 18, 2026, except as provided for in paragraphs (f)(11) through (15) of this section.

* * * * *

(11) In §§ 63.116(g) and 63.118(a)(5) and (f)(7) substitute “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(10),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(12) Substitute “as defined in § 63.101” with “as defined in § 63.1423”.

(13) Substitute “For each source as defined in § 63.101, on and after July 15, 2027,” with “For each affected source as described in § 63.1420(a), on and after March 18, 2029,”.

(14) Substitute “§ 63.108” with “§ 63.1436”.

(15) Section 63.113(k)(4) does not apply.

(g) *Process vents in ethylene oxide service.* Beginning no later than the compliance dates specified in § 63.1422(h), if a process vent is in ethylene oxide service then the owner or operator must comply with paragraph (g)(1), (2), or (3) of this section in addition to all other applicable requirements specified in this section.

(1) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a flare; or

(2) Reduce emissions of ethylene oxide by venting emissions through a closed vent system to a control device that reduces ethylene oxide by greater than or equal to 99.9 percent by weight, or to a concentration less than 1 ppmv for each process vent or to less than 100 pounds per year for all combined process vents within the process. If a combustion device is used, the ethylene

oxide concentration of 1 ppmv must be corrected to 3 percent oxygen.

(3) Reduce emissions of ethylene oxide by greater than or equal to 99.9 percent by weight or to less than 100 pounds per year for all combined process vents within the process by using ECO as a control technique or by using a combination of ECO and venting emissions through a closed vent system to a control device.

(h) *Maintenance vents.* Beginning no later than the compliance dates specified in § 63.1422(h), an owner or operator may designate a process vent that is subject to the requirements in paragraph (b), (c), or (d) of this section as a maintenance vent if the vent is only used as a result of start-up, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. The owner or operator must comply with the applicable requirements in paragraphs (h)(1) through (3) of this section for each maintenance vent. Any vent designated as a maintenance vent is only subject to the maintenance vent provisions in this paragraph (h) and the associated recordkeeping and reporting requirements in § 63.1430(a) and (h)(9), respectively. The owner or operator does not need to designate a maintenance vent as a Group 1 or Group 2 process vent (for process vents associated with nonepoxide organic HAP emissions from making or modifying product and process vents associated with affected sources that produce polyether polyols using tetrahydrofuran) nor identify maintenance vents in a Notification of Compliance Status report. [Note: process vents subject to the requirements in paragraph (f) of this section may also designate a process vent as a maintenance vent; and even though those standards are the same as the standards specified in this paragraph (h), those standards are specified in the HON process vent requirements according to paragraph (f) of this section.]

(1) Prior to venting to the atmosphere, remove process liquids from the equipment as much as practical and depressurize the equipment to either: A flare meeting the requirements of § 63.1436, as applicable, or using any combination of a non-flare combustion, recovery, and/or recapture device meeting the requirements in paragraph (b)(1)(i) or (ii), (b)(2)(ii) or (iii), (c)(1)(ii), (c)(3)(ii), or (d)(2) of this section, until one of the following conditions, as applicable, is met.

(i) The concentration of the vapor in the equipment served by the

maintenance vent is less than 10 percent of its lower explosive limit (LEL) and has an outlet concentration less than or equal to 20 ppmv hydrogen halide and halogen HAP.

(ii) If there is no ability to measure the concentration of the vapor in the equipment based on the design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 pounds per square inch gauge (psig) or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the concentration of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) is less than 10 percent of its LEL.

(iii) The equipment served by the maintenance vent contains less than 50 pounds of total volatile organic compounds (VOC).

(iv) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in paragraphs (h)(1)(i) through (iii) of this section can be met prior to installing or removing a blind flange or similar equipment blind, then the pressure in the equipment served by the maintenance vent must be reduced to 2 psig or less before installing or removing the equipment blind. During installation or removal of the equipment blind, active purging of the equipment may be used provided the equipment pressure at the location where purge gas is introduced remains at 2 psig or less.

(2) Except for maintenance vents complying with paragraph (h)(1)(iii) of this section, the owner or operator must determine the concentration or, if applicable, equipment pressure using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(3) For maintenance vents complying with paragraph (h)(1)(iii) of this section, the owner or operator must determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined from equipment design specifications. Equipment contents may be determined using process knowledge.

■ 9. Revise § 63.1426 to read as follows:

§ 63.1426 Process vent requirements for determining organic HAP concentration, control efficiency, and aggregated organic HAP emission reduction for a PMPU.

(a) *Use of a flare.* (1) Except as specified in paragraph (a)(2) of this section, when a flare is used to comply with § 63.1425(b)(1)(i) (in combination with other control techniques), (b)(2)(i), (c)(1)(i), (c)(3)(i), or (d)(1), the owner or operator shall comply with § 63.1437(c), and is not required to demonstrate the control efficiency for the flare, if the owner or operator chooses to assume a 98 percent control efficiency for that flare, as allowed under paragraph (e)(2)(i) of this section. In order to use only a flare to comply with § 63.1425(b)(1)(i), or to use a flare and apply a control efficiency greater than 98 percent, an owner or operator shall submit a request in accordance with § 63.6(g) in either the Precompliance Report described in § 63.1439(e)(4), or in a supplement to the precompliance report, as described in § 63.1439(e)(4)(vii).

(2) Beginning no later than the compliance dates specified in § 63.1422(h), paragraph (a)(1) of this section no longer applies and instead the owner or operator shall comply with § 63.1436 when a flare is used to comply with § 63.1425(b)(1)(i) (in combination with other control techniques), (b)(2)(i), (c)(1)(i), (c)(3)(i), or (d)(1). In order to use only a flare to comply with § 63.1425(b)(1)(i) or to use a flare and apply a control efficiency greater than 98 percent, an owner or operator shall submit a request in accordance with § 63.670(r), with exceptions noted in § 63.1436, and receive approval by the Administrator.

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a combustion, recovery, or recapture device specified in paragraphs (b)(1) through (6) of this section is used to comply with § 63.1425(b), (c), or (d).

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater where the process vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A combustion, recovery, or recapture device for which a performance test was conducted within the preceding 5-year period, using the same Methods specified in this section and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process

changes is not required to conduct an initial performance test. Subsequent performance tests shall be conducted according to § 63.1437(a). The operating parameters reported under the previous performance test shall be sufficient to meet the parameter monitoring requirements in this subpart.

(4) A boiler or process heater burning hazardous waste for which the owner or operator:

(i) Has been issued a final hazardous waste permit under part 270 of this chapter and complies with the requirements for hazardous waste burned in boilers and industrial furnaces in part 266, subpart H of this chapter;

(ii) Has certified compliance with the interim status requirements for hazardous waste burned in boilers and industrial furnaces in part 266, subpart H of this chapter;

(iii) Meets the requirement specified in paragraph (b)(4)(v) of this section, and has submitted a Notification of Compliance under § 63.1207(j) and complies with the requirements of subpart EEE of this part; or

(iv) Meets the requirement specified in paragraph (b)(4)(v) of this section, complies with subpart EEE of this part, and will submit a Notification of Compliance under § 63.1207(j) by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(v) The owner and operator may not waive performance testing pursuant to § 63.1207(d)(4).

(5) A hazardous waste incinerator for which the owner or operator:

(i) Has been issued a final permit under part 270 of this chapter and complies with the requirements for incinerators in part 264, subpart O of this chapter;

(ii) Has certified compliance with the interim status requirements for incinerators in part 265, subpart O of this chapter;

(iii) Meets the requirement specified in paragraph (b)(5)(v) of this section, and has submitted a Notification of Compliance under § 63.1207(j) and complies with the requirements in subpart EEE of this part; or

(iv) Meets the requirement specified in paragraph (b)(5)(v) of this section, complies with the requirements in subpart EEE of this part, and will submit a Notification of Compliance under § 63.1207(j) by the date the owner or operator would have been required to submit the initial performance test report for this subpart.

(v) The owner and operator may not waive performance testing pursuant to § 63.1207(d)(4).

(6) Except as specified in paragraph (b)(7) of this section, combustion, recovery or recapture device (except for condensers) performance may be determined by using the design evaluation described in paragraph (f) of this section, provided that the combustion, recovery or recapture device receives less than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPUs, determined in accordance with paragraph (d) of this section. If a combustion, recovery or recapture device exempted from testing in accordance with this paragraph receives more than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPUs, the owner or operator shall comply with the performance test requirements in paragraph (c) of this section and before March 18, 2026 shall submit the test report in the next Periodic Report. Beginning March 18, 2026, the test report no longer needs to be submitted with the Periodic Report and only needs to be submitted according to § 63.1439(e)(9).

(7) Beginning on the compliance dates specified in § 63.1422(h), paragraphs (b)(6) and (f) of this section do not apply. Instead, the owner or operator shall comply with the performance test requirements in paragraph (c) of this section.

(c) *Determination of organic HAP concentration and control efficiency.* Except as provided in paragraphs (a) and (b) of this section, an owner or operator using a combustion, recovery, or recapture device to comply with an epoxide or organic HAP percent reduction efficiency requirement in § 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2); an epoxide concentration limitation in § 63.1425(b)(1)(ii) or (b)(2)(ii); or an annual epoxide emission limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv), shall conduct a performance test using the applicable procedures in paragraphs (c)(1) through (4) of this section. The organic HAP or epoxide concentration and percent reduction may be measured as total epoxide, total organic HAP, or as TOC minus methane and ethane according to the procedures specified. When conducting testing in accordance with this section, the owner or operator is only required to measure HAP of concern for the specific requirement for which compliance is being determined. For instance, to determine compliance with the epoxide emission requirement of § 63.1425(b), the owner or operator is only required to measure epoxide control efficiency or outlet concentration.

(1) *Sampling site location.* The sampling site location shall be determined as specified in paragraphs (c)(1)(i) and (ii) of this section.

(i) For determination of compliance with a percent reduction of total epoxide requirement in § 63.1425(b)(1)(i), (b)(2)(ii), or a percent reduction of total organic HAP requirement in § 63.1425(c)(1)(ii), (c)(3)(ii), or (d)(2), sampling sites shall be located at the inlet of the combustion, recovery, or recapture device as specified in paragraphs (c)(1)(i)(A), (B), and (C) of this section, and at the outlet of the combustion, recovery, or recapture device.

(A) For process vents from continuous unit operations, the inlet sampling site shall be determined in accordance with either paragraph (c)(1)(i)(A)(1) or (2) of this section.

(1) To demonstrate compliance with either the provisions for epoxide emissions in § 63.1425(b) or the provisions for nonepoxide organic HAP emissions from catalyst extraction in § 63.1425(d), the inlet sampling site shall be located after the exit from the continuous unit operation but before any recovery devices, or

(2) To demonstrate compliance with the requirements for nonepoxide organic HAP emissions from the use of nonepoxide organic HAP in making or modifying the product in § 63.1425(c), the inlet sampling site shall be located after all control techniques to reduce epoxide emissions and after the final nonepoxide organic HAP recovery device.

(B) For process vents from batch unit operations, the inlet sampling site shall be determined in accordance with either paragraph (c)(1)(i)(B)(1) or (2) of this section.

(1) To demonstrate compliance with either the provisions for epoxide emissions in § 63.1425(b) or the provisions for nonepoxide organic HAP emissions from catalyst extraction in § 63.1425(d), the inlet sampling site shall be located after the exit from the batch unit operation but before any recovery device.

(2) To demonstrate compliance with the requirements for nonepoxide organic HAP emissions in making or modifying the product in § 63.1425(c), the inlet sampling site shall be located after all control techniques to reduce epoxide emissions but before any nonepoxide organic HAP recovery device.

(C) If a process vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the

location of the inlet sampling sites shall ensure the measurement of total organic HAP or TOC (minus methane and ethane) concentrations in all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(ii) To determine compliance with a parts per million by volume total epoxide or TOC limit in § 63.1425(b)(1)(ii) or (b)(2)(iii), the sampling site shall be located at the outlet of the combustion, recovery, or recapture device.

(2) *Frequency.* Performance tests and compliance determinations shall be conducted according to the schedule in § 63.1437(a).

(3) *Testing conditions and calculation of TOC or total organic HAP concentration.*

(i) Testing conditions shall be as specified in paragraphs (c)(3)(i)(A) through (E) of this section, as appropriate.

(A) Testing of process vents from continuous unit operations shall be conducted at maximum representative operating conditions, as described in § 63.1437(a)(1). Each test shall consist of three 1-hour runs. Gas stream volumetric flow rates shall be measured at approximately equal intervals of about 15 minutes during each 1-hour run. The organic HAP concentration (of the HAP of concern) shall be determined from samples collected in an integrated sample over the duration of each 1-hour test run, or from grab samples collected simultaneously with the flow rate measurements (at approximately equal intervals of about 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. For gas streams from continuous unit operations, the organic HAP concentration or control efficiency used to determine compliance shall be the average organic HAP concentration or control efficiency of the three test runs.

(B) Testing of process vents from batch unit operations shall be conducted at absolute worst-case conditions or hypothetical worst-case conditions, as defined in paragraphs (c)(3)(i)(B)(1) through (5) of this section. Worst-case conditions are limited to the maximum production allowed in a state or Federal permit or regulation and the conditions specified in § 63.1437(a)(1). Gas stream volumetric flow rates shall be measured at 15-minute intervals, or at least once during the emission episode. The organic HAP or TOC concentration shall be determined from samples collected in an integrated sample over the duration of the test, or from grab samples collected simultaneously with the flow rate measurements (at approximately equal intervals of about 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate.

(1) Absolute worst-case conditions are defined by the criteria presented in paragraph (c)(3)(i)(B)(1)(i) or (ii) of this section if the maximum load is the most challenging condition for the control device. Otherwise, absolute worst-case conditions are defined by the conditions in paragraph (c)(3)(i)(B)(1)(iii) of this section.

(i) The period in which the inlet to the control device will contain at least 50 percent of the maximum HAP load (in lbs) capable of being vented to the control device over any 8-hour period. An emission profile as described in paragraph (c)(3)(i)(B)(3)(i) of this section shall be used to identify the 8-hour period that includes the maximum projected HAP load.

(ii) A period of time in which the inlet to the control device will contain the highest HAP mass loading rate capable of being vented to the control device. An emission profile as described in paragraph (c)(3)(i)(B)(3)(i) of this section shall be used to identify the period of maximum HAP loading.

(iii) The period of time when the HAP loading or stream composition

(including non-HAP) is most challenging for the control device. These conditions include, but are not limited to the following: periods when the stream contains the highest combined VOC and HAP load described by the emission profiles in paragraph (c)(3)(i)(B)(3) of this section; periods when the streams contain HAP constituents that approach limits of solubility for scrubbing media; or periods when the streams contain HAP constituents that approach limits of adsorptivity for carbon adsorption systems.

(2) Hypothetical worst-case conditions are simulated test conditions that, at a minimum, contain the highest hourly HAP load of emissions that would be predicted to be vented to the control device from the emissions profile described in paragraph (c)(3)(i)(B)(3)(ii) or (iii) of this section.

(3) The owner or operator shall develop an emission profile for the vent to the control device that describes the characteristics of the vent stream at the inlet to the control device under worst case conditions. The emission profile shall be developed based on any one of the procedures described in paragraphs (c)(3)(i)(B)(3)(i) through (iii) of this section, as required by paragraph (c)(3)(i)(B) of this section.

(i) The emission profile shall consider all emission episodes that could contribute to the vent stack for a period of time that is sufficient to include all processes venting to the stack and shall consider production scheduling. The profile shall describe the HAP load to the device that equals the highest sum of emissions from the episodes that can vent to the control device in any given period, not to exceed 1 hour. Emissions per episode shall be divided by the duration of the episode only if the duration of the episode is longer than 1 hour, and emissions per episode shall be calculated using the procedures specified in the following equation:

Equation 1 to Paragraph (c)(3)(i)(B)(3)(i)

$$E = \sum_{i=1}^n P_i MW_i \times \frac{(V)(t)}{(R)(T)} \times \frac{P_T}{P_T - \sum_{j=1}^m (P_j)}$$

Where:

E = Mass of HAP emitted.

V = Purge flow rate at the temperature and pressure of the vessel vapor space.

R = Ideal gas law constant.

T = Temperature of the vessel vapor space (absolute).

P_i = Partial pressure of the individual HAP.

P_j = Partial pressure of individual condensable VOC compounds (including HAP).

P_T = Pressure of the vessel vapor space.

MW_i = Molecular weight of the individual HAP.

t = Time of purge.

n = Number of HAP compounds in the emission stream.

i = Identifier for a HAP compound.

j = Identifier for a condensable compound.

m = Number of condensable compounds (including HAP) in the emission stream.

(ii) The emission profile shall consist of emissions that meet or exceed the highest emissions that would be expected under actual processing conditions. The profile shall describe equipment configurations used to generate the emission events, volatility of materials processed in the equipment, and the rationale used to identify and characterize the emission events. The emissions may be based on using compounds more volatile than compounds actually used in the process(es), and the emissions may be generated from all equipment in the process(es) or only selected equipment.

(iii) The emission profile shall consider the capture and control system limitations and the highest emissions that can be routed to the control device, based on maximum flow rate and concentrations possible because of limitations on conveyance and control equipment (e.g., fans, LEL alarms and safety bypasses).

(4) Three runs, each at a minimum of the complete duration of the batch venting episode or 1 hour, whichever is shorter, and a maximum of 8 hours, are required for performance testing. Each run shall occur over the same worst-case conditions, as defined in paragraph (c)(3)(i)(B) of this section.

(5) If a condenser is used to control the process vent stream(s), the worst case emission episode(s) shall represent a period of time in which a process vent from the batch cycle or combination of cycles (if more than one cycle is vented through the same process vent) will require the maximum heat removal capacity, in Btu/hr, to cool the process vent stream to a temperature that, upon calculation of HAP concentration, will yield the required removal efficiency for the entire cycle. The calculation of maximum heat load shall be based on the emission profile described in paragraph (c)(3)(i)(B)(3) of this section that will allow calculation of sensible and latent heat loads.

(ii) The concentration of either TOC (minus methane or ethane) or total organic HAP (of the HAP of concern) shall be calculated according to paragraph (c)(3)(ii)(A) or (B) of this section.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be

computed for each run using the following equation:

Equation 2 to Paragraph (c)(3)(ii)(A)

$$C_{\text{TOC}} = \sum_{i=1}^x \frac{\left(\sum_{j=1}^n C_{ji} \right)}{x}$$

Where:

C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

C_{ji} = Concentration of sample components j of sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to Equation 2 to Paragraph (c)(3)(ii)(A) of this section, except that only the organic HAP species shall be summed.

(iii) The concentration of TOC or total organic HAP shall be corrected to 3 percent oxygen if a combustion device is used.

(A) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of appendix A to part 60 of this chapter or the manual method in ANSI/ASME PTC 19–10–1981—Part 10 (Incorporated by reference, see § 63.14) shall be used to determine the oxygen concentration (%O_{2d}). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic HAP samples are taken.

(B) The concentration corrected to 3 percent oxygen shall be computed using the following equation:

Equation 3 to Paragraph (c)(3)(iii)(B)

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c = Concentration of TOC or organic HAP corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_m = Concentration of TOC (minus methane and ethane) or organic HAP, dry basis, parts per million by volume.

%O_{2d} = Concentration of oxygen, dry basis, percent by volume.

(4) *Test methods.* When testing is conducted to measure emissions from an affected source, the test methods specified in paragraphs (c)(4)(i) through (iv) of this section shall be used, as applicable.

(i) For sample and velocity traverses, Method 1 or 1A of appendix A to part 60 of this chapter shall be used, as

appropriate, except that references to particulate matter in Method 1A do not apply for the purposes of this subpart.

(ii) The velocity and gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of appendix A to part 60 of this chapter, as appropriate.

(iii) The concentration measurements shall be determined using the methods described in paragraphs (c)(4)(iii)(A) through (C) of this section.

(A) Method 18 of appendix A–6 to part 60 of this chapter or Method 320 of appendix A to this part may be used to determine the HAP concentration in any control device efficiency determination. ASTM D6420–18 (Incorporated by reference, see § 63.14) may also be used in lieu of Method 18 or Method 320, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420–18 as measurable; ASTM D6420–18 shall not be used for methane, ethane, or as a total VOC method.

(B) Method 25 of appendix A to part 60 of this chapter may be used to determine total gaseous nonmethane organic concentration for control efficiency determinations in combustion devices.

(C) Method 25A of appendix A to part 60 of this chapter may be used to determine the HAP or TOC concentration for control device efficiency determinations under the conditions specified in Method 25 of appendix A to part 60 of this chapter for direct measurements of an effluent with a flame ionization detector, or in demonstrating compliance with the 20 ppmv standard. The instrument shall be calibrated on methane or the predominant HAP. If calibrating on the predominant HAP, the use of Method 25A of appendix A to part 60 of this chapter shall comply with paragraphs (c)(4)(iii)(C)(1) through (3) of this section.

(1) The organic HAP used as the calibration gas for Method 25A of appendix A to part 60 of this chapter shall be the single organic HAP representing the largest percent by volume.

(2) The use of Method 25A of appendix A to part 60 of this chapter, is acceptable if the response from the high level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(3) The span value of the analyzer shall be less than 100 ppmv.

(iv) Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A to part 63 to this part may be used.

(5) *Calculation of percent reduction efficiency.* The following procedures shall be used to calculate percent reduction efficiency:

(i) Test duration shall be as specified in paragraphs (c)(3)(i)(A) through (B) of this section, as appropriate.

(ii) The mass rate of either TOC (minus methane and ethane) or total organic HAP of the HAP of concern (E_i , E_o) shall be computed.

(A) The following equations shall be used:

Equation 4 to Paragraph (c)(5)(ii)(A)

$$E_i = K_2 \left(\sum_{j=1}^n C_{ij} M_{ij} \right) Q_i$$

Equation 5 to Paragraph (c)(5)(ii)(A)

$$E_o = K_2 \left(\sum_{j=1}^n C_{oj} M_{oj} \right) Q_o$$

Where:

C_{ij} , C_{oj} = Concentration of sample component j of the gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry basis, parts per million by volume.

E_i , E_o = Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry basis, kilogram per hour.

M_{ij} , M_{oj} = Molecular weight of sample component j of the gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, gram/gram-mole.

Q_i , Q_o = Flow rate of gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry standard cubic meter per minute.

K_2 = Constant, 2.494×10^{-6} (parts per million) $^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

(B) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by Method 18 of appendix A–6 to part 60 of this chapter, Method 320 of appendix A to this part, or ASTM D6420–18 (Incorporated by reference, see § 63.14) are summed using Equations 4 and 5 to Paragraph (c)(5)(ii)(A) of this section.

(C) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using Equations 4 and 5 to Paragraph (c)(5)(ii)(A) of this section.

(iii) The percent reduction in TOC (minus methane and ethane) or total organic HAP shall be calculated using the following equation:

Equation 6 to Paragraph (c)(5)(iii)

$$R = \frac{E_i - E_o}{E_i} (100)$$

Where:

R = Control efficiency of combustion, recovery, or recapture device, percent.

E_i = Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the combustion, recovery, or recapture device as calculated under paragraph (c)(5)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

E_o = Mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the combustion, recovery, or recapture device, as calculated under paragraph (c)(5)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

(iv) If the process vent stream entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total organic HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total organic HAP in all combusted process vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic HAP, respectively, exiting the combustion device.

(d) *Determination of uncontrolled organic HAP emissions.* For each process vent at a PMPU that is complying with the process vent control requirements in § 63.1425(b)(1)(i), (b)(1)(iii), (b)(2)(ii), (b)(2)(iv), (c)(1)(ii), or (d)(2) using a combustion, recovery, or recapture device, the owner or operator shall determine the uncontrolled organic HAP emissions in accordance with the provisions of this paragraph, with the exceptions noted in paragraph (d)(1) of this section. The provisions of § 63.1427(c)(1) shall be used to calculate uncontrolled epoxide emissions prior to the onset of an extended cook out.

(1) *Exemptions.* Except as specified in paragraph (d)(1)(iv) of this section, the owner or operator is not required to determine uncontrolled organic HAP emissions for process vents in a PMPU if the conditions in paragraph (d)(1)(i), (ii), or (iii) of this section are met.

(i) For PMPUs where all process vents subject to the epoxide emission reduction requirements of § 63.1425(b) are controlled at all times using a combustion, recovery, or recapture

device, or extended cookout, the owner or operator is not required to determine uncontrolled epoxide emissions.

(ii) For PMPUs where the combination of process vents from batch unit operations associated with the use of nonepoxide organic HAP to make or modify the product is subject to the Group 1 requirements of § 63.1425(c)(1), the owner or operator is not required to determine uncontrolled nonepoxide organic HAP emissions for those process vents if every process vent from a batch unit operation associated with the use of nonepoxide organic HAP to make or modify the product in the PMPU is controlled at all times using a combustion, recovery, or recapture device.

(iii) For PMPUs where all process vents associated with catalyst extraction that are subject to the organic emission reduction requirements of § 63.1425(d)(2) are controlled at all times using a combustion, recovery, or recapture device, the owner or operator is not required to determine uncontrolled organic HAP emissions for those process vents.

(iv) Beginning on the compliance dates specified in § 63.1422(h), paragraphs (d)(1)(i) through (iii) of this section do not apply.

(2) *Process vents from batch unit operations.* The uncontrolled organic HAP emissions from an individual batch cycle for each process vent from a batch unit operation shall be determined using the procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U), § 63.488(b)(1) through (9). Uncontrolled emissions from process vents from batch unit operations shall be determined after the exit from the batch unit operation but before any recovery device.

(3) *Process vents from continuous unit operations.* The uncontrolled organic HAP emissions for each process vent from a continuous unit operation in a PMPU shall be determined at the location specified in paragraph (d)(3)(i) of this section, using the procedures in paragraph (d)(3)(ii) of this section.

(i) For process vents subject to either the provisions for epoxide emissions in § 63.1425(b) or the provisions for organic HAP emissions from catalyst extraction in § 63.1425(d), uncontrolled emissions shall be determined after the exit from the continuous unit operation but before any recovery device.

(ii) The owner or operator shall determine the hourly uncontrolled organic HAP emissions from each process vent from a continuous unit operation in accordance with paragraph (c)(5)(ii) of this section, except that the

emission rate shall be determined at the location specified in paragraph (d)(3)(i) of this section.

(e) *Determination of organic HAP emission reduction for a PMPU.* (1) The owner or operator shall determine the organic HAP emission reduction for process vents in a PMPU that are complying with § 63.1425(b)(1)(i),

(b)(2)(ii), (c)(1)(ii), or (d)(2) using Equation 7 to Paragraph (e)(1) of this section. The organic HAP emission reduction shall be determined for each group of process vents subject to the same paragraph (*i.e.*, paragraph (b), (c), or (d)) of § 63.1425. For instance, process vents that emit epoxides are subject to paragraph (b) of § 63.1425.

Therefore, if the owner or operator of an existing affected source is complying with the 98 percent reduction requirement in § 63.1425(b)(2)(ii), the organic HAP (*i.e.*, epoxide) emission reduction shall be determined for the group of vents in a PMPU that are subject to this paragraph.

Equation 7 to Paragraph (e)(1)

$$\text{RED}_{\text{PMPU}} = \left[\frac{\sum_{i=1}^n (E_{\text{unc}, i}) \left(\frac{R_i}{100} \right)}{\sum_{i=1}^n (E_{\text{unc}, i}) + \sum_{j=1}^m (E_{\text{unc}, j})} \right] * 100$$

Where:

RED_{PMPU} = Organic HAP emission reduction for the group of process vents subject to the same paragraph of § 63.1425, percent.

$E_{\text{unc}, i}$ = Uncontrolled organic HAP emissions from process vent *i* that is controlled using a combustion, recovery, or recapture device, or extended cookout, kg/batch cycle for process vents from batch unit operations, kg/hr for process vents from continuous unit operations.

n = Number of process vents in the PMPU that are subject to the same paragraph of § 63.1425 and that are controlled using a combustion, recovery, or recapture device, or extended cookout.

R_i = Control efficiency of the combustion, recovery, or recapture device, or extended cookout, used to control organic HAP emissions from vent *i*, determined in accordance with paragraph (e)(2) of this section.

$E_{\text{unc}, j}$ = Uncontrolled organic HAP emissions from process vent *j* that is not controlled using a combustion, recovery, or recapture device, kg/batch cycle for process vents from batch unit operations, kg/hr for process vents from continuous unit operations.

m = Number of process vents in the PMPU that are subject to the same paragraph of § 63.1425 and that are not controlled using a combustion, recovery, or recapture device.

(2) The control efficiency, R_i , shall be assigned as specified below in paragraph (e)(2)(i), (ii), (iii), (iv), (v), or (vi) of this section.

(i) Except as specified in paragraph (e)(2)(v) of this section, if the process vent is controlled using a flare (and the owner or operator has not previously obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.6(g)) or a combustion device specified in paragraph (b)(1), (2), (4), or (5) of this section, and a performance test has not

been conducted, the control efficiency shall be assumed to be 98 percent.

(ii) If the process vent is controlled using a combustion, recovery, or recapture device for which a performance test has been conducted in accordance with the provisions of paragraph (c) of this section, or for which a performance test that meets the requirements of paragraph (b)(3) of this section has been previously performed, the control efficiency shall be the efficiency determined by the performance test.

(iii) If epoxide emissions from the process vent are controlled using extended cookout, the control efficiency shall be the efficiency determined in accordance with § 63.1427(e).

(iv) Except as specified in paragraph (e)(2)(vi) of this section, if the process vent is controlled using a flare, and the owner or operator has obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.6(g), the control efficiency shall be the efficiency approved in accordance with § 63.6(g).

(v) Beginning no later than the compliance dates specified in § 63.1422(h), if the process vent is controlled using a flare meeting the requirements specified in § 63.1436 (and the owner or operator has not previously obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.6(g)) or a combustion device specified in paragraph (b)(1), (2), (4), or (5) of this section, and a performance test has not been conducted, the control efficiency shall be assumed to be 98 percent.

(vi) Beginning no later than the compliance dates specified in § 63.1422(h), if the process vent is controlled using a flare, and the owner

or operator has obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.670(r), with exceptions noted in § 63.1436, the control efficiency shall be that approved efficiency.

(f) *Design evaluation.* Except as specified in paragraph (b)(7) of this section, a design evaluation is required for those control techniques that receive less than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPU, if the owner or operator has chosen not to conduct a performance test for those control techniques in accordance with paragraph (b)(6) of this section. The design evaluation shall include documentation demonstrating that the control technique being used achieves the required control efficiency under worst-case conditions, as determined from the emission profile described in § 63.1426(c)(3)(i)(B)(3)(i).

(1) Except for ECO whose design evaluation is presented in paragraph (f)(2) of this section, to demonstrate that a control technique meets the required control efficiency, a design evaluation shall address the composition and organic HAP concentration of the vent stream, immediately preceding the use of the control technique. A design evaluation shall also address other vent stream characteristics and control technique operating parameters, as specified in any one of paragraphs (f)(1)(i) through (vi) of this section, depending on the type of control technique that is used. If the vent stream is not the only inlet to the control technique, the owner or operator shall also account for all other vapors, gases, and liquids, other than fuels, received into the control technique from one or

more PMPUs, for purposes of the efficiency determination.

(i) For an enclosed combustion technique used to comply with the provisions of § 63.1425(b)(1), (c)(1), or (d), with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C, the design evaluation shall document that these conditions exist.

(ii) For a combustion control technique that does not satisfy the criteria in paragraph (f)(1)(i) of this section, the design evaluation shall document the control efficiency and address the characteristics listed in paragraphs (f)(1)(ii)(A) through (C) of this section, depending on the type of control technique.

(A) For a thermal vapor incinerator, in the design evaluation the owner or operator shall consider the autoignition temperature of the organic HAP, shall consider the vent stream flow rate, and shall establish the design minimum and average temperatures in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, in the design evaluation the owner or operator shall consider the vent stream flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, in the design evaluation the owner or operator shall consider the vent stream flow rate; shall establish the design minimum and average flame zone temperatures and combustion zone residence time; and shall describe the method and location where the vent stream is introduced into the flame zone.

(iii) For a condenser, in the design evaluation the owner or operator shall consider the vent stream flow rate, relative humidity, and temperature, and shall establish the design outlet organic HAP compound concentration level, design average temperature of the exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration.

(iv) For a carbon adsorption system that regenerates the carbon bed directly onsite as part of the control technique (such as a fixed-bed adsorber), in the design evaluation the owner or operator shall consider the vent stream flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and

working capacity of activated carbon used for the carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of the carbon. For vacuum desorption, the pressure drop shall also be included.

(v) For a carbon adsorption system that does not regenerate the carbon bed directly onsite as part of the control technique (such as a carbon canister), in the design evaluation the owner or operator shall consider the vent stream mass or volumetric flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control technique and source operating schedule.

(vi) For a scrubber, in the design evaluation the owner or operator shall consider the vent stream composition, constituent concentrations, liquid-to-vapor ratio, scrubbing liquid flow rate and concentration, temperature, and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and shall include the additional information in paragraphs (f)(1)(vi)(A) and (B) of this section for trays and a packed column scrubber.

(A) Type and total number of theoretical and actual trays.

(B) Type and total surface area of packing for entire column and for individual packed sections, if the column contains more than one packed section.

(2) For ECO, the design evaluation shall establish the minimum duration (time) of the ECO, the maximum pressure at the end of the ECO, or the maximum epoxide concentration in the reactor liquid at the end of the ECO for each product class.

(g) *Ethylene oxide compliance determination procedures.* To demonstrate compliance with the emission limits specified in § 63.1425(g) for process vents in ethylene oxide service and establish the parameter monitoring level(s), owners and operators must meet the requirements specified either paragraph (g)(1), (2), (3), or (4) of this section.

(1) Comply with § 63.124, except:

(i) Substitute “§ 63.100(k)(11)” with “§ 63.1422(h)”.

(ii) Substitute “§ 63.113(j)” with “§ 63.1425(g)”.

(iii) Substitute “§ 63.113(j)(1)” with “§ 63.1425(g)(1)”.

(iv) Substitute “§ 63.113(j)(2)” with “§ 63.1425(g)(2) or (3)”.

(v) Substitute “§ 63.108” with “§ 63.1436”.

(vi) When owners or operators conduct performance tests on batch process vents using the procedures in § 63.116(c):

(A) Substitute “the schedule in § 63.103(b)(1) of subpart F of this part” with “§ 63.1437(a)”.

(B) The inlet sampling site shall be located after the exit from the batch unit operation but before any recovery or control device.

(C) The minimum sampling time for each run shall be the complete duration of the batch venting episode or 1 hour, whichever is shorter, instead of that stated in § 63.116(c)(3)(i) or (c)(4)(i).

(D) For process vents from batch unit operations, performance tests shall be conducted either at absolute worst-case conditions or hypothetical worst-case conditions as specified in § 63.1437(a)(1).

(vii) If § 63.124(a)(4) refers to “5 pounds per year,” then substitute it for “100 pounds per year”; otherwise, § 63.124(a)(4) applies as written.

(viii) To demonstrate compliance with § 63.124(b)(2), in lieu of an FTIR CEMS, you may choose to use a gas chromatographic CEMS meeting the requirements of Performance Specification 9 of appendix B to part 60 of this chapter. If an owner or operator uses a gas chromatographic CEMS, then the owner or operator does not need to conduct the performance testing required in § 63.124(b)(3) or the operating parameter monitoring required in paragraphs § 63.124(b)(4) through (6).

(ix) When § 63.124 refers to § 63.148: (A) Substitute “§ 63.100(k)(10)” with “§ 63.1422(h)”.

(B) Substitute “For each source as defined in § 63.101,” with “For each affected source as described in § 63.1420(a),”.

(C) Substitute “Except for pressure relief devices subject to § 63.165(e)(4),” with “Except for pressure relief devices subject to § 63.1434(c),”.

(2) If a combination of ECO and a control device is used for reducing ethylene oxide emissions to meet the percent emission reduction requirement or total combined process vent mass emissions limit in § 63.1425(g)(3), then the owner or operator must comply with both the requirements specified in

paragraph (g)(1) of this section and the requirements specified in § 63.1427.

(3) If ECO alone is used to comply with § 63.1425(g)(3) (*i.e.*, no control devices are used to further reduce ethylene oxide emissions from a process vent already controlled by ECO), then the requirements specified in paragraphs (g)(1) and (2) of this section do not apply. Instead, the owner or operator is required to meet the requirements in § 63.1427.

(4) If an owner or operator is demonstrating compliance with the combined process vent mass emissions limit in § 63.1425(g)(2) or (3) and, within the process, some process vents are uncontrolled (*i.e.*, neither control devices nor ECO are used to reduce ethylene oxide emissions) while others are controlled, then the owner or operator must comply with paragraph (g)(1), (2), or (3) of this section for the controlled process vents and must measure ethylene oxide from the uncontrolled process vents using the procedures specified in § 63.124(a)(2)(ii) and (iii), except:

(A) Substitute “ethylene oxide exiting the outlet of the process vent prior to any releases to the atmosphere” for “ethylene oxide entering the control device and exiting the control device”.

(B) When the inlet of a control device is referenced in any parameter in Equation 1 to § 63.124(a)(2)(iii), it refers to the outlet of the process vent prior to any releases to the atmosphere.

(C) Equation 2 to § 63.124(a)(2)(iii) does not apply.

■ 10. Revise § 63.1427 to read as follows:

§ 63.1427 Process vent requirements for processes using extended cookout as an epoxide emission reduction technique.

(a) *Applicability of extended cookout requirements.* Owners or operators of affected sources that produce polyether polyols using epoxides, and that are using ECO as a control technique to reduce epoxide emissions in order to comply with percent emission reduction requirements in § 63.1425(b)(1)(i) or (b)(2)(ii), or the requirements in § 63.1425(g)(3), shall comply with the provisions of this section. The owner or operator that is using ECO in order to comply with the emission factor requirements in § 63.1425(b)(1)(iii) or § 63.1425(b)(2)(iv) shall demonstrate that the specified emission factor is achieved by following the requirements in § 63.1431. If additional control devices are used to further reduce the HAP emissions from a process vent already controlled by ECO, then the owner or operator shall also comply with the testing, monitoring,

recordkeeping, and reporting requirements associated with the additional control device, as specified in §§ 63.1426, 63.1429, and 63.1430, respectively. For the purposes of this section, replace “epoxide” with “ethylene oxide” when ECO is used to comply with the standards in § 63.1425(g)(3).

(1) For each product class, the owner or operator shall determine the batch cycle percent epoxide emission reduction for the most difficult to control product in the product class, where the most difficult to control product is the polyether polyol that is manufactured with the slowest pressure decay curve.

(2) The owner or operator may determine the batch cycle percent epoxide emission reduction by directly measuring the concentration of the unreacted epoxide, or by using process knowledge, reaction kinetics, and engineering knowledge, in accordance with paragraph (a)(2)(i) of this section.

(i) If the owner or operator elects to use any method other than direct measurement, the epoxide concentration shall be determined by direct measurement for one product from each product class and compared with the epoxide concentration determined using the selected estimation method, with the exception noted in paragraph (a)(2)(ii) of this section. If the difference between the directly determined epoxide concentration and the calculated epoxide concentration is less than 25 percent, then the selected estimation method will be considered to be an acceptable alternative to direct measurement for that class.

(ii) Except as specified in paragraph (a)(2)(iii) of this section, if uncontrolled epoxide emissions prior to the end of the ECO are less than 10 tons per year (9.1 megagrams per year), the owner or operator is not required to perform the direct measurement required in paragraph (a)(2)(i) of this section. Uncontrolled epoxide emissions prior to the end of the ECO shall be determined by the procedures in paragraph (d)(1) of this section.

(iii) Beginning on the compliance dates specified in § 63.1422(h), paragraph (a)(2)(ii) of this section does not apply. Instead, if uncontrolled epoxide emissions prior to the end of the ECO are less than 10 tons per year (9.1 megagrams per year) and the owner or operator elects to use any method other than direct measurement, the owner or operator must comply with either paragraph (a)(2)(iii)(A) or (B) of this section.

(A) Comply with paragraph (a)(2)(i) of this section.

(B) For products with the same capping epoxide (*i.e.*, the last epoxide into the reactor before the end of the epoxide feed), verify the estimation method with direct measurement of three products representing the lowest, median, and highest estimated emissions at the end of the ECO. If the difference between the directly determined epoxide concentration and the calculated epoxide concentration is less than 25 percent for each product, then the selected estimation method will be considered to be an acceptable alternative to direct measurement for all products using that capping epoxide.

(b) *Define the end of epoxide feed.* The owner or operator shall define the end of the epoxide feed in accordance with paragraph (b)(1) or (2) of this section.

(1) The owner or operator shall determine the concentration of epoxide in the reactor liquid at the point in time when all epoxide has been added to the reactor and prior to any venting. This concentration shall be determined in accordance with the procedures in paragraph (f)(1)(i) of this section.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the end of the epoxide feed may be defined by the reactor epoxide partial pressure at the point in time when all epoxide reactants have been added to the reactor. This reactor epoxide partial pressure shall be determined in accordance with the procedures in paragraph (g) of this section.

(i) No epoxide is emitted before the end of the ECO;

(ii) Extended cookout is the only control technique to reduce epoxide emissions; and

(iii) The owner or operator elects to determine the percent epoxide emission reduction for the ECO using reactor epoxide partial pressure in accordance with paragraph (e)(2) of this section.

(c) *Define the onset of the ECO.* The owner or operator shall calculate the uncontrolled emissions for the batch cycle by calculating the epoxide emissions, if any, prior to the onset of the ECO, plus the epoxide emissions at the onset of the ECO. The onset of the ECO is defined as the point in time when the combined unreacted epoxide concentration in the reactor liquid is equal to 25 percent of the concentration of epoxides at the end of the epoxide feed, which was determined in accordance with paragraph (b) of this section.

(1) The uncontrolled epoxide emissions for the batch cycle shall be

determined using the following equation:

Equation 1 to Paragraph (c)(1)

$$E_{e,u} = (C_{liq,i})(V_{liq,i})(D_{liq,i}) + (C_{vap,i})(V_{vap,i})(D_{vap,i}) + (E_{epox,bef})$$

Where:

$E_{e,u}$ = Uncontrolled epoxide emissions at the onset of the ECO, kilograms per (kg/) batch.

$C_{liq,i}$ = Concentration of epoxide in the reactor liquid at the onset of the ECO, which is equal to 25 percent of the concentration of epoxide at the end of the epoxide feed, determined in accordance with paragraph (b)(1) of this section, weight percent.

$V_{liq,i}$ = Volume of reactor liquid at the onset of the ECO, liters.

$D_{liq,i}$ = Density of reactor liquid, kg/liter.

$C_{vap,i}$ = Concentration of epoxide in the reactor vapor space at the onset of the ECO, determined in accordance with paragraph (f)(2) of this section, weight percent.

$V_{vap,i}$ = Volume of the reactor vapor space at the onset of the ECO, liters.

$D_{vap,i}$ = Vapor density of reactor vapor space at the onset of the ECO, kg/liter.

$E_{epox,bef}$ = Epoxide emissions that occur prior to the onset of the ECO, determined in accordance with the provisions of § 63.1426(d), kilograms.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are

met, the owner or operator may define the onset of the ECO as the point in time when the reactor epoxide partial pressure equals 25 percent of the reactor epoxide partial pressure at the end of the epoxide feed, and is not required to determine the uncontrolled epoxide emissions in accordance with paragraph (c)(1) of this section.

(d) *Determine emissions at the end of the ECO.* The owner or operator shall calculate the epoxide emissions at the end of the ECO, where the end of the ECO is defined as the point immediately before the time when the reactor contents are emptied and/or the reactor vapor space purged to the atmosphere or to a combustion, recovery, or recapture device.

(1) The epoxide emissions at the end of the ECO shall be determined using the following equation:

Equation 2 to Paragraph (d)(1)

$$E_{e,E} = (C_{liq,f})(V_{liq,f})(D_{liq,f}) + (C_{vap,f})(V_{vap,f})(D_{vap,f})$$

Where:

$E_{e,E}$ = Epoxide emissions at the end of the ECO, kg.

$C_{liq,f}$ = Concentration of epoxide in the reactor liquid at the end of the ECO, determined in accordance with

paragraph (f)(1) of this section, weight percent.

$V_{liq,f}$ = Volume of reactor liquid at the end of the ECO, liters.

$D_{liq,f}$ = Density of reactor liquid, kg/liter.

$C_{vap,f}$ = Concentration of epoxide in the reactor vapor space as it exits the reactor at the end of the ECO, determined in accordance with paragraph (f)(2) of this section, weight percent.

$V_{vap,f}$ = Volume of the reactor vapor space as it exits the reactor at the end of the ECO, liters.

$D_{vap,f}$ = Vapor density of reactor vapor space at the end of the ECO, kg/liter.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator may determine the reactor epoxide partial pressure at the end of the ECO instead of determining the uncontrolled epoxide emissions at the end of the ECO in accordance with paragraph (d)(1) of this section.

(e) *Determine percent epoxide emission reduction.* (1) The owner or operator shall determine the percent epoxide emission reduction for the batch cycle using the following equation:

Equation 3 to Paragraph (e)(1)

$$R_{batchcycle} = \left[\frac{E_{e,u} - (E_{e,E}) \left(1 - \frac{R_{addon,i}}{100} \right) - (E_{e,o}) \left(1 - \frac{R_{addon,j}}{100} \right)}{E_{e,u}} \right] * 100$$

Where:

$R_{batchcycle}$ = Epoxide emission reduction for the batch cycle, percent.

$E_{e,E}$ = Epoxide emissions at the end of the ECO determined in accordance with paragraph (d)(1) of this section, kilograms.

$R_{addon,i}$ = Control efficiency of combustion, recovery, or recapture device that is used to control epoxide emissions after the ECO, determined in accordance with the provisions of § 63.1426(c) or 63.124(a)(2)(ii) through (iv) as specified in § 63.1426(g), percent.

$E_{e,o}$ = Epoxide emissions that occur before the end of the ECO, determined in accordance with the provisions of § 63.1426(d) or 63.124(a)(2)(ii) and (iii) as specified in § 63.1426(g), kilograms.

$R_{addon,j}$ = Control efficiency of combustion, recovery, or recapture device that is used to control epoxide emissions that occur before the end of the ECO, determined in accordance with the provisions of § 63.1426(c) or 63.124(a)(2)(ii) through (iv) as specified in § 63.1426(g), percent.

$E_{e,u}$ = Uncontrolled epoxide emissions determined in accordance with paragraph (c)(1) of this section, kilograms.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator may determine the percent epoxide emission reduction for the batch cycle using reactor epoxide partial pressure and the following equation, instead of using the procedures in paragraph (e)(1) of this section.

Equation 4 to Paragraph (e)(2)

$$R_{batchcycle} = \left[1 - \frac{P_{epox,f}}{P_{epox,i}} \right] * 100$$

Where:

$R_{batchcycle}$ = Epoxide emission reduction for the batch cycle, percent.

$P_{epox,i}$ = Reactor epoxide partial pressure at the onset of the ECO, determined in

accordance with paragraph (c)(2) of this section, mm Hg.

$P_{epox,f}$ = Reactor epoxide partial pressure at the end of the ECO, determined in accordance with paragraph (c)(2) of this section, mm Hg.

(f) *Determination of epoxide concentrations.* The owner or operator shall determine the epoxide concentrations in accordance with the procedures in this paragraph.

(1) The owner or operator shall determine the concentration of epoxide in the reactor liquid using either direct measurement in accordance with paragraph (f)(1)(i) of this section, or reaction kinetics in accordance with paragraph (f)(1)(ii) of this section. An owner or operator may also request to use an alternative methodology in accordance with paragraph (f)(1)(iii) of this section.

(i) The owner or operator shall submit a standard operating procedure for obtaining the liquid sample, along with

the test method used to determine the epoxide concentration. This information shall be submitted in the Precompliance Report. For ethylene oxide, the test method must be as described in § 63.109(b)(1) or another alternative approved by the Administrator in accordance with § 63.7(f).

(ii) Determine the epoxide concentration in the reactor liquid using the following equation:

Equation 5 to Paragraph (f)(1)(ii)

$$C_{\text{liq, f}} = C_{\text{liq, i}} e^{-kt}$$

Note: This equation assumes a first order reaction with respect to epoxide concentration, where:

$C_{\text{liq, f}}$ = Concentration of epoxide in the reactor liquid at the end of the time period, weight percent.

$C_{\text{liq, i}}$ = Concentration of epoxide in the reactor liquid at the beginning of the time period, weight percent.

k = Reaction rate constant, 1/hr.

t = Time, hours.

(iii) If the owner/operator deems that the methods listed in paragraphs (f)(1)(i) and (ii) of this section are not appropriate for the reaction system for a PMPU, then the owner/operator may submit a request for the use of an alternative method.

(2) The owner or operator shall determine the concentration of epoxide in the reactor vapor space using either direct measurement in accordance with paragraph (f)(2)(i) of this section, or by engineering estimation in accordance with paragraph (f)(2)(ii) of this section. An owner or operator may also request to use an alternative methodology in accordance with paragraph (f)(2)(iii) of this section.

(i) The owner or operator shall take two representative samples from a bleed valve off the reactor's process vent. The owner or operator shall determine the total epoxide concentration using Method 18 of appendix A to part 60 of this chapter.

(ii) Determine the epoxide concentration in the vapor space using Raoult's Law or another appropriate phase equilibrium equation and the liquid epoxide concentration, determined in accordance with paragraph (f)(1) of this section.

(iii) If the owner/operator deems that the methods listed in paragraphs (f)(1)(i) and (ii) of this section are not appropriate for the reaction system for a PMPU, then the owner/operator may submit a request for the use of an alternative method.

(g) *Determination of pressure.* The owner or operator shall determine the total pressure of the system using standard pressure measurement devices calibrated according to the

manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(h) *Determination if pressure decay curves are similar.* The owner or operator shall determine the pressure decay curve as defined in § 63.1423. Products with similar pressure decay curves constitute a product class. To determine if two pressure decay curves are similar when the pressure decay curves for products have different starting and finishing pressures, the owner or operator shall determine the time when the pressure has fallen to half its total pressure by using the following equation:

Equation 6 to Paragraph (h)

$$\text{Time } (P_{\text{half}1}) - \text{Time } (P_{\text{half}2}) < 20\% T_{\text{AVG}}$$

Where:

$P_{\text{half}1}$ = Half the total pressure of the epoxide for product 1.

Time ($P_{\text{half}1}$) = Time when the pressure has fallen to half its total pressure for product 1.

$P_{\text{half}2}$ = Half the total pressure of the epoxide for product 2.

Time ($P_{\text{half}2}$) = Time when the pressure has fallen to half its total pressure for product 2.

T_{AVG} = The average time to cookout to the point where the epoxide pressure is 25 percent of the epoxide pressure at the end of the feed step for products 1 and 2.

(i) *ECO monitoring requirements.* The owner or operator using ECO shall comply with the monitoring requirements of this paragraph to demonstrate continuous compliance with this subpart. Paragraphs (i)(1) through (3) of this section address monitoring of the extended cookout.

(1) To comply with the provisions of this section, the owner or operator shall monitor one of the parameters listed in paragraphs (i)(1)(i) through (iii) of this section, or may utilize the provision in paragraph (i)(1)(iv) of this section.

(i) Time from the end of the epoxide feed;

(ii) The epoxide partial pressure in the closed reactor;

(iii) Direct measurement of epoxide concentration in the reactor liquid at the end of the ECO, when the reactor liquid is still in the reactor, or after the reactor liquid has been transferred to another vessel; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (i)(1)(i) through (iii) of this section, as described in § 63.1439(f).

(2) During the determination of the percent epoxide emission reduction in

paragraphs (b) through (e) of this section, the owner or operator shall establish, as a level that shall be maintained during periods of operation, one of the parameters in paragraphs (i)(2)(i) through (iii) of this section, or may utilize the procedure in paragraph (i)(2)(iv) of this section, for each product class, or for each product if complying with paragraph (a)(2)(iii)(B) of this section.

(i) The time from the end of the epoxide feed to the end of the ECO;

(ii) The reactor epoxide partial pressure at the end of the ECO;

(iii) The epoxide concentration in the reactor liquid at the end of the ECO, when the reactor liquid is still in the reactor, or after the reactor liquid has been transferred to another vessel; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (i)(2)(i) through (iii) of this section, as described in § 63.1439(f).

(3) For each batch cycle where ECO is used to reduce epoxide emissions, the owner or operator shall record the value of the monitored parameter at the end of the ECO. This parameter is then compared with the level established in accordance with paragraph (i)(2) of this section to determine if an excursion has occurred. An ECO excursion is defined as one of the situations described in paragraphs (i)(3)(i) through (v) of this section.

(i) When the time from the end of the epoxide feed to the end of the ECO is less than the time established in paragraph (i)(2)(i) of this section;

(ii) When the reactor epoxide partial pressure at the end of the ECO is greater than the partial pressure established in paragraph (i)(2)(ii) of this section;

(iii) When the epoxide concentration in the reactor liquid at the end of the ECO is greater than the epoxide concentration established in paragraph (i)(2)(iii) of this section;

(iv) When the parameter is not measured and recorded at the end of the ECO; or

(v) When the alternative monitoring parameter is outside the range established under § 63.1439(f) for proper operation of the ECO as a control technique.

(j) *Recordkeeping requirements.* (1) The owner or operator shall maintain the records specified in paragraphs (j)(1)(i) and (ii) of this section, for each product class. The owner or operator shall also maintain the records related to the initial determination of the percent epoxide emission reduction specified in paragraphs (j)(1)(iii)

through (xi) of this section, as applicable, for each product class.

(i) Operating conditions of the product class, including:

- (A) Pressure decay curve;
- (B) Minimum reaction temperature;
- (C) Number of reactive hydrogens in the raw material;
- (D) Minimum catalyst concentration;
- (E) Ratio of E.O./PO at the end of the epoxide feed; and
- (F) Reaction conditions, including the size of the reactor or batch.

(ii) A listing of all products in the product class, along with the information specified in paragraphs (j)(1)(i)(A) through (F) of this section, for each product. When complying with paragraph (a)(2)(iii)(B) of this section, note the capping epoxide for each product.

(iii) The concentration of epoxide at the end of the epoxide feed, determined in accordance with paragraph (b)(1) of this section.

(iv) The concentration of epoxide at the onset of the ECO, determined in accordance with paragraph (c) of this section.

(v) The uncontrolled epoxide emissions at the onset of the ECO, determined in accordance with paragraph (c)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the uncontrolled epoxide emissions.

(vi) The epoxide emissions at the end of the ECO, determined in accordance with paragraph (d)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the epoxide emissions.

(vii) The percent epoxide reduction for the batch cycle, determined in accordance with paragraph (e)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the percent reduction.

(viii) The parameter level, established in accordance with paragraph (i)(3) of this section.

(ix) If epoxide emissions occur before the end of the ECO, the owner or operator shall maintain records of the time and duration of all such emission episodes that occur during the initial demonstration of batch cycle efficiency.

(x) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator is not required to maintain the records specified in paragraphs (j)(1)(iii) through (iv) of this section, but shall maintain the records specified in paragraphs (j)(1)(x)(A), (B), and (C) of this section.

(A) The reactor epoxide partial pressure at the following times:

- (1) At end of the epoxide feed, determined in accordance with paragraph (b)(2) of this section;
- (2) At the onset of the ECO, established in accordance with paragraph (c)(2) of this section; or
- (3) At the end of the ECO, determined in accordance with paragraph (d)(2) of this section.

(B) The percent epoxide reduction for the batch cycle, determined in accordance with paragraph (e)(2) of this section. The records shall also include all the measurements and assumptions used to calculate the percent reduction.

(C) The reactor epoxide partial pressure at the end of the ECO.

(xi) For each product class, the product that was determined to be the most difficult to control and how that determination was made. When complying with paragraph (a)(2)(iii)(B) of this section, the three products used to verify the estimation method for each capping epoxide and how those products were chosen as representative of the lowest, median, and highest estimated emissions. For each verification, keep a record of the difference between the directly determined concentration and the calculated concentration using the estimation method.

(2) The owner or operator shall maintain the records specified in paragraphs (j)(2)(i) through (v) of this section.

(i) For each batch cycle, the product being produced and the product class to which it belongs. When complying with paragraph (a)(2)(iii)(B) of this section, note the capping epoxide for the product produced.

(ii) For each batch cycle, the owner or operator shall record the value of the parameter monitored in accordance with paragraph (i)(3) of this section.

(iii) If a combustion, recovery, or recapture device is used to reduce emission in conjunction with ECO, the owner or operator shall record the information specified in § 63.1430(d) and comply with the monitoring provisions in § 63.1429 or § 63.124 as specified in § 63.1426(g).

(iv) [Reserved]

(v) If epoxide emissions occur before the end of the ECO, the owner or operator shall maintain records of the time and duration of all such emission episodes.

(k) *Reporting requirements.* The owner or operator shall comply with the reporting requirements in this paragraph.

(1) The information specified in paragraphs (k)(1)(i) through (ii) of this

section shall be provided in the Precompliance Report, as specified in § 63.1439(e)(4).

(i) A standard operating procedure for obtaining the reactor liquid sample and a method that will be used to determine the epoxide concentration in the liquid, in accordance with paragraph (f)(1)(i) of this section.

(ii) A request to monitor a parameter other than those specified in paragraph (i)(1)(i), (ii), or (iii) of this section, as provided for in paragraph (i)(1)(iv) of this section.

(2) The information specified in paragraphs (k)(2)(i) through (iv) of this section shall be provided in the Notification of Compliance Status, as specified in § 63.1439(e)(5).

(i) For each product class, the information specified in paragraphs (k)(2)(i)(A) through (C) of this section.

(A) The operating conditions of this product class, as specified in paragraph (j)(1)(i) of this section.

(B) A list of all products in the product class. When complying with paragraph (a)(2)(iii)(B) of this section, note the capping epoxide for each product.

(C) The percent epoxide emission reduction, determined in accordance with paragraph (e) of this section.

(ii) The parameter for each product class, as determined in accordance with paragraph (i)(2) of this section.

(iii) If a combustion, recovery, or recapture device is used in addition to ECO to reduce emissions, the information specified in § 63.1430(g)(1).

(iv) If epoxide emissions occur before the end of the ECO, a listing of the time and duration of all such emission episodes that occur during the initial demonstration of batch cycle efficiency.

(3) The information specified in paragraphs (k)(3)(i) through (iii) of this section shall be provided in the Periodic Report, as specified in § 63.1439(e)(6).

(i) Reports of each batch cycle for which an ECO excursion occurred, as defined in paragraph (i)(3) of this section. At a minimum, include an identification of the PMPU as well as the start date and time of the batch cycle and the type of excursion in the Periodic Report. When the excursion is caused by a parameter exceedance, specify the operating parameter, the applicable limit, and the value of the monitored parameter at the end of the ECO.

(ii) Notification of each batch cycle when the time and duration of epoxide emissions before the end of the ECO, recorded in accordance with paragraph (j)(2)(v) of this section, exceed the time and duration of the emission episodes during the initial epoxide emission

percentage reduction determination, as recorded in paragraph (j)(1)(viii) of this section. At a minimum, include an identification of the PMPU as well as the start date and time of the batch cycle in the Periodic Report.

(iii) If a combustion, recovery, or recapture device is used to reduce emissions, the information specified in § 63.1430(h).

(l) *New polyether polyol products.* If an owner or operator wishes to utilize ECO as a control option for a polyether polyol not previously assigned to a product class and reported to the Agency in accordance with either paragraph (k)(2)(i)(B), (l)(1)(ii), or (l)(2)(iii) of this section, the owner or operator shall comply with the provisions of paragraph (l)(1) or (2) of this section.

(1) If the operating conditions of the new polyether polyol are consistent with the operating conditions for an existing product class, the owner or operator shall comply with the requirements in paragraphs (l)(1)(i) and (ii) of this section.

(i) The owner or operator shall update the list of products for the product class required by paragraph (j)(1)(ii) of this section, and shall record the information in paragraphs (j)(1)(i)(A) through (F) of this section for the new product.

(ii) Within 180 days after the production of the new polyether polyol, the owner or operator shall submit a report updating the product list previously submitted for the product class. This information may be submitted along with the next Periodic Report.

(2) If the operating conditions of the new polyether polyol do not conform with the operating characteristics of an existing product class, the owner or operator shall establish a new product class and shall comply with provisions of paragraphs (l)(2)(i) through (iii) of this section.

(i) The owner or operator shall establish the batch cycle percent epoxide emission reduction in accordance with paragraphs (b) through (g) of this section for the product class.

(ii) The owner or operator shall establish the records specified in paragraph (j)(1) of this section for the product class.

(iii) Within 180 days of the production of the new polyether polyol, the owner or operator shall submit a report containing the information specified in paragraphs (k)(2)(i) and (ii) of this section.

(m) *Polyether polyol product changes.* If a change in operation, as defined in paragraph (m)(1) of this section, occurs

for a polyether polyol that has been assigned to a product class and reported to the Agency in accordance with paragraph (k)(2)(i)(B), (l)(1)(ii), or (l)(2)(iii) of this section, the owner or operator shall comply with the provisions of paragraphs (m)(2) through (3) of this section.

(1) A change in operation for a polyether polyol is defined as a change in any one of the parameters listed in paragraphs (m)(1)(i) through (ix) of this section.

(i) A significant change in reaction kinetics;

(ii) Use of a different oxide reactant;

(iii) Use of a different E.O./PO ratio;

(iv) A lower reaction temperature;

(v) A lower catalyst feed on a mole/mole fraction OH basis;

(vi) A shorter cookout;

(vii) A lower reactor pressure;

(viii) A different type of reaction, (e.g., a self-catalyzed vs. catalyzed reaction); or

(ix) A marked change in reaction conditions (e.g., a markedly different liquid level).

(2) If the operating conditions of the product after the change in operation remain within the operation conditions of the product class to which the product was assigned, the owner or operator shall update the records specified in paragraphs (j)(1)(i)(A) through (F) of this section for the product.

(3) If the operating conditions of the product after the change in operation are outside of the operating conditions of the product class to which the product was assigned, the owner or operator shall comply with the requirements in paragraph (m)(3)(i) or (ii) of this section, as appropriate.

(i) If the new operating conditions of the polyether polyol are consistent with the operating conditions for another existing product class, the owner or operator shall comply with the requirements in paragraphs (m)(3)(i)(A) and (B) of this section.

(A) The owner or operator shall update the list of products for the product class that the product is leaving, and for the product class that the product is entering, and shall record the new information in paragraphs (j)(1)(i)(A) through (F) of this section for the product.

(B) Within 180 days after the change in operating conditions for the polyether polyol product, the owner or operator shall submit a report updating the product lists previously submitted for the product class. This information may be submitted along with the next Periodic Report.

(ii) If the new operating conditions of the polyether polyol product do not

conform with the operating characteristics of an existing product class, the owner or operator shall establish a new product class and shall comply with provisions of paragraphs (m)(3)(ii)(A) through (C) of this section.

(A) The owner or operator shall establish the batch cycle percent epoxide emission reduction in accordance with paragraphs (b) through (g) of this section for the product class.

(B) The owner or operator shall establish the records specified in paragraph (j)(1) of this section for the product class.

(C) Within 180 days of the change in operating conditions for the polyether polyol, the owner or operator shall submit a report containing the information specified in paragraphs (k)(2)(i) and (ii) of this section.

■ 11. Amend § 63.1428 by revising paragraph (a) introductory text, and paragraphs (c), (d), and (e) to read as follows:

§ 63.1428 Process vent requirements for group determination of PMPUs using a nonepoxide organic HAP to make or modify the product.

(a) *Process vents from batch unit operations.* The owner or operator shall determine, for each PMPU located at an affected source, if the combination of all process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product is a Group 1 combination of batch process vents, as defined in § 63.1423. The annual uncontrolled nonepoxide organic HAP emissions, determined in accordance with paragraph (b) of this section, and annual average flow rate, determined if applicable in accordance with paragraph (c) of this section, shall be determined for all process vents from batch unit operations associated with the use of a nonepoxide organic HAP to make or modify the product, with the exception of those vents specified in paragraph (i) of this section, at the location after all applicable control techniques have been applied to reduce epoxide emissions in accordance with paragraph (a)(1) or (2) of this section.

* * * * *

(c) *Minimum emission level exemption.* (1) Except as specified in paragraph (c)(2) of this section, if the annual emissions of TOC or nonepoxide organic HAP from the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol for a PMPU are less than 11,800 kg/yr, the owner or operator of that PMPU is not required to

comply with the provisions in paragraphs (d) and (e) of this section.

(2) Beginning no later than the compliance dates specified in § 63.1422(h), paragraph (c)(1) of this section no longer applies.

(d) *Determination of average flow rate and annual average flow rate.* Except as specified in paragraph (d)(3) of this section, the owner or operator shall determine, for each PMPU, the total annual average flow rate for the combination of all process vents from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify a product in accordance with paragraphs (d)(1) and (2) of this section.

(1) The annual average flow rate for each process vent from batch unit operations that is associated with the use of nonepoxide organic HAP to make or modify the product shall be determined using the batch process vent procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U), § 63.488(e).

(2) The owner or operator shall sum the annual average flow rates from the individual process vents from batch unit operations in a PMPU, determined in accordance with paragraph (d)(1) of this section, to obtain the total annual average flow rate for the combination of process vents associated with the use of a nonepoxide organic HAP to make or modify the product, for the PMPU.

(3) Beginning no later than the compliance dates specified in § 63.1422(h), paragraphs (d)(1) and (2) of this section no longer apply.

(e) *Determination of cutoff flow rate.*

(1) Except as specified in paragraph (e)(2) of this section, for each PMPU at an affected source that uses nonepoxide organic HAP to make or modify the product, the owner or operator shall calculate the cutoff flow rate using the following equation:

Equation 1 of Paragraph (e)(1)

$$CFR = (0.00437)(AE) - 51.6$$

Where:

CFR = Cutoff flow rate, standard cubic meters per minute (scmm).

AE = Annual TOC or nonepoxide organic HAP emissions from the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product, as determined in paragraph (b)(2) of this section, kg/yr.

(2) Beginning no later than the compliance dates specified in § 63.1422(h), paragraph (e)(1) of this section no longer applies.

* * * * *

■ 12. Amend § 63.1429 by revising paragraphs (a)(2) and (6), adding

paragraphs (a)(8) and (9), and revising paragraph (c) to read as follows:

§ 63.1429 Process vent monitoring requirements.

(a) * * *

(2) Except as specified in paragraph (a)(8) of this section, where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.

* * * * *

(6) Except as specified in paragraph (a)(9) of this section, where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of +10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle, and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

* * * * *

(8) Beginning no later than the compliance dates specified in § 63.1422(h), paragraph (a)(2) of this section no longer applies and instead the owner or operator of the affected source shall comply with § 63.1436 for the flare.

(9) Beginning no later than the compliance dates specified in § 63.1422(h), if the owner or operator vents emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then the owner or operator shall install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (a)(9)(i) through (iii) of this section.

(i) Conduct an initial performance test or design evaluation of the adsorber and establish the breakthrough limit and adsorber bed life.

(ii) Monitor the HAP or TOC concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (a)(9)(iii)(B) of this section. The owner or operator shall measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of appendix A-7 to part 60 of this chapter using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of appendix A-7 to part 60 of this chapter using methane,

propane, or the primary HAP being controlled as the calibration gas.

(iii) Comply with paragraph (a)(9)(iii)(A) of this section, and comply with the monitoring frequency according to paragraph (a)(9)(iii)(B) of this section.

(A) The first adsorber in series shall be replaced immediately when breakthrough, as defined in § 63.1423, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph (a)(9)(iii)(A), “immediately” means within eight hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. The owner or operator shall monitor at the outlet of the first adsorber within three days of replacement to confirm it is performing properly.

(B) Based on the adsorber bed life established according to paragraph (a)(9)(i) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than two months of life remaining, at least weekly if the adsorbent has between two months and two weeks of life remaining, and at least daily if the adsorbent has two weeks or less of life remaining.

* * * * *

(c) *Monitoring of bypass lines.* The owner or operator of a process vent using a process vent system that contains bypass lines that could divert a process vent stream away from the combustion, recovery, or recapture device used to comply with the process vent control requirements in § 63.1425(b), (c), or (d) shall comply with paragraphs (c)(1) or (2), and (3) of this section. Except as specified in paragraph (c)(3) of this section, equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief devices needed for safety purposes are not subject to paragraph (c)(1) or (2) of this section.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once at approximately equal intervals of about 15 minutes. Records shall be generated as specified in the process vent reporting and recordkeeping provisions in § 63.1430(d)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the combustion, recovery, or recapture device and to the atmosphere; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in the process vent reporting and recordkeeping provisions in § 63.1430(d)(4)(i).

(3) Beginning no later than the compliance dates specified in § 63.1422(h):

(i) The use of a bypass line at any time on a closed vent system to divert emissions (subject to the emission standards in § 63.1425) to the atmosphere or to a control device not meeting the requirements specified in this subpart is an emissions standards violation.

(ii) The last sentence in paragraph (c) of this section no longer applies. Instead, the exemptions specified in paragraphs (c)(3)(ii)(A) and (B) of this section apply.

(A) Except for pressure relief devices subject to § 63.1434(c), equipment such as low leg drains and equipment subject to the requirements of subpart H of this part are not subject to paragraph (c) of this section.

(B) Open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in § 60.482–6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as § 60.482–6(a)(2), (b), and (c) are not subject to paragraph (c) of this section.

* * * * *

■ 13. Revise § 63.1430 to read as follows:

§ 63.1430 Process vent reporting and recordkeeping requirements.

(a) *Maintenance vent compliance records.* For each maintenance vent opening subject to the requirements of § 63.1425(h), owners and operators must keep the applicable records specified in paragraphs (a)(1) through (5) of this section.

(1) Owners and operators must maintain standard site procedures used to deinventory equipment for safety purposes (e.g., hot work or vessel entry procedures) to document the procedures used to meet the requirements in § 63.1425(h). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of § 63.1425(h)(1)(i), and

the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of § 63.1425(h)(1)(ii), and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of § 63.1425(h)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in paragraph (a)(1) of this section are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this paragraph (a)(4), records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of § 63.1425(h)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to

estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

(b) *Records to demonstrate compliance.* The owner or operator complying with the process vent control requirements in § 63.1425(b), (c), or (d) shall keep the following records, as applicable, readily accessible:

(1) For flares complying with § 63.11(b) to comply with the process vent control requirements in § 63.1425(b)(2)(i), (c)(1)(i), (c)(3)(i), or (d)(1), the owner or operator shall keep the records specified in paragraphs (b)(1)(i) through (iii) of this section. For flares complying with § 63.1436, the owner or operator shall comply with the recordkeeping requirements specified therein.

(i) The flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate determinations, and exit velocity determinations made during the flare specification determination required by § 63.1437(c); and

(iii) All periods during the flare specification determination required by § 63.1437(c) when all pilot flames are absent.

(2) The following information when using a combustion, recovery, or recapture device (other than a flare) to achieve compliance with the process vent control requirements in § 63.1425(b), (c), or (d):

(i) For a combustion, recovery, or recapture device being used to comply with a percent reduction requirement of § 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2), or the annual epoxide emission limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv), the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in the process vent requirements in § 63.1426;

(ii) For a combustion device being used to comply with an outlet concentration limitation of § 63.1425(b)(1)(ii) or (b)(2)(iii), the concentration of organic HAP or TOC outlet of the combustion device, as determined using the procedures specified in the process vent requirements in § 63.1426;

(iii) For a boiler or process heater, a description of the location at which the process vent stream is introduced into the boiler or process heater;

(iv) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or is used as a secondary

fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1426.

(c) *Records related to the establishment of parameter monitoring levels.* For each parameter monitored according to the process vent monitoring requirements in § 63.1429(a) and either table 5 or 6 to this subpart, or for alternate parameters and/or parameters for alternate control techniques monitored according to the alternative parameter monitoring reporting requirements in § 63.1439(f) as allowed under § 63.1429(b), maintain documentation showing the establishment of the level that indicates that the combustion, recovery, or recapture device is operated in a manner to ensure compliance with the provisions of this subpart, as required by the process vent monitoring requirements in § 63.1429(d).

(d) *Records to demonstrate continuous compliance.* The owner or operator that uses a combustion, recovery, or recapture device to comply with the process vent control requirements in § 63.1425(b), (c), or (d) shall keep the following records readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under the process vent monitoring requirements in § 63.1429(a) as applicable, and listed in table 5 or 6 to this subpart, as applicable, or specified by the Administrator in accordance with the alternative parameter monitoring reporting requirements in § 63.1439(f), as allowed under § 63.1429(b). These records shall be kept as specified under § 63.1439(d), except as specified in paragraphs (d)(1)(i) and (ii) of this section.

(i) For flares, the records specified in table 5 or 6 to this subpart shall be maintained in place of continuous records.

(ii) For carbon adsorbers used for process vents from batch unit operations, the records specified in table 5 of this subpart shall be maintained in place of daily averages.

(2) Records of the daily average value for process vents from continuous unit operations or batch unit operations of each continuously monitored parameter, except as provided in paragraphs (d)(2)(i) and (ii) of this section.

(i) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the daily averages. In

addition, monitoring data recorded during periods of non-operation of the process (or specific portion thereof) resulting in cessation of organic HAP emissions shall not be included in computing the daily averages.

(ii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum parameter monitoring level established in accordance with the process vent monitoring requirements in § 63.1429(d), the owner or operator may record that all values were above the minimum or below the maximum level established, rather than calculating and recording a daily average for that operating day.

(3) Except as specified in paragraph (d)(6) of this section, hourly records of whether the flow indicator for bypass lines specified under § 63.1429(c)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the time(s) of all periods when the process vent was diverted from the combustion, recovery, or recapture device, or the flow indicator specified in § 63.1429(c)(1) was not operating.

(4) Except as specified in paragraph (d)(6) of this section, where a seal or closure mechanism is used to comply with the process vent monitoring requirements for bypass lines in § 63.1429(c)(2), hourly records of flow are not required. For compliance with § 63.1429(c)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanism has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has been broken.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high level adjustments. In addition, records specifying any other periods of process or combustion, recovery, or recapture device operation when monitors are not operating.

(6) For each flow event from a bypass line subject to the requirements in § 63.1429(c), beginning no later than the compliance dates specified in § 63.1422(h), the owner or operator shall maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a

control device not meeting the requirements in this subpart, the owner or operator shall include an estimate of the volume of gas, the concentration of organic HAP in the gas, and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(7) For process vents in ethylene oxide service subject to the requirements of § 63.1426(g), owners and operators shall keep the records specified in paragraphs (d)(7)(i) and (ii) of this section in addition to those records specified elsewhere in this section.

(i) For process vents, include all uncontrolled, undiluted ethylene oxide concentration measurements, and the calculations used to determine the total uncontrolled ethylene oxide mass emissions rate for the sum of all vent gas streams.

(ii) If emissions are vented through a closed vent system to a non-flare control device, then the owner or operator shall keep records of all periods during which operating values are outside of the applicable operating limits specified in § 63.124(b)(4) through (6) when regulated material is being routed to the non-flare control device. The record shall specify the identification of the control device, the operating parameter, the applicable limit, and the highest (for maximum operating limits) or lowest (for minimum operating limits) value recorded during the period.

(e) *Records related to the group determination for process vents that are associated with the use of nonepoxide organic HAP to make or modify the product—*

(1) *Process vents from batch unit operations.* Except as provided in paragraphs (e)(1)(vi) and (vii) of this section, the owner or operator of an affected source shall maintain the records specified in paragraphs (e)(1)(i) through (v) of this section for each PMPU that uses a nonepoxide organic HAP to make or modify the product in batch unit operations. The records required to be maintained by this paragraph are limited to the information developed and used to make the group determination under the process vent requirements for processes using a nonepoxide organic HAP to make or modify the product in § 63.1428(a) through (e), as appropriate. If an owner or operator did not need to develop certain information (e.g., annual average flow rate) to determine the group status, the owner or operator is not required to develop additional information. The owner or operator may elect Group 1 status for process vents without making

a Group 1/Group 2 determination. In such event, none of the records specified in paragraphs (e)(1)(i) through (v) are required.

(i) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle for each unique product class made in the PMPU.

(ii) Total annual uncontrolled TOC or nonexpoxide organic HAP emissions from the combination of process vents from batch unit operations associated with the use of nonexpoxide organic HAP to make or modify the product, as determined in accordance with the process vent requirements for group determinations in § 63.1428(b).

(iii) The annual average flow rate for the combination of process vents from batch unit operations associated with the use of organic HAP to make or modify the product, as determined in accordance with the process vent requirements for group determinations in § 63.1428(d).

(iv) The cutoff flow rate, determined in accordance with the process vent requirements for group determinations in § 63.1428(e).

(v) The results of the PMPU group determination (*i.e.*, whether the combination of process vents is Group 1 or Group 2).

(vi) If the combination of all process vents from batch unit operations associated with the use of an organic HAP to make or modify the product is subject to the Group 1 batch process vent control requirements for nonexpoxide HAP emissions from making or modifying the product in § 63.1425(c)(1), none of the records in paragraphs (e)(1)(i) through (v) of this section are required.

(vii) If the total annual emissions from the combination of process vents from batch unit operations associated with the use of an organic HAP to make or modify the product are less than the thresholds specified in the definition of Group 1 combination of batch process vents in § 63.1423, only the records in paragraphs (e)(1)(i) and (ii) of this section are required.

(2) *Process vents from continuous unit operations.* The owner or operator of an affected source that uses nonexpoxide organic HAP to make or modify the product in continuous unit operations shall keep records regarding the measurements and calculations performed to determine the TRE index value of each process vent stream. The owner or operator of Group 1 continuous process vents that are subject to the control requirements of

§ 63.1425(c)(3) is not required to keep these records.

(f) *Records for Group 2 process vents that are associated with the use of nonexpoxide organic HAP to make or modify the product.* The following records shall be maintained for PMPUs with a Group 2 combination of batch process vents and/or one or more Group 2 continuous process vents.

(1) *Process vents from batch unit operations—emission records.* The owner or operator shall maintain records of the combined total annual nonexpoxide organic HAP emissions from process vents associated with the use of nonexpoxide organic HAP to make or modify the product for each PMPU where the combination of these process vents is classified as Group 2.

(2) *Process vents from continuous unit operations—monitoring records for vents with TRE between 1.0 and 4.0.* The owner or operator using a recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in the HON process vent requirements in § 63.113(a)(3) or (d) shall keep the following records readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under § 63.114(b) and listed in table 5 to this subpart or specified by the Administrator in accordance with §§ 63.114(c) and 63.117(e); and

(ii) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.152(f). If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 5 to this subpart shall be kept instead of the daily averages.

(3) *Process vents from continuous unit operations—records related to process changes.* The owner or operator subject to the provisions of this subpart who has elected to demonstrate compliance with the TRE index value greater than 4.0 under § 63.113(e) or greater than 1.0 under § 63.113(a)(3) or (d) shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e); and

(ii) Any recalculation of the TRE index value pursuant to § 63.115(e).

(4) *Process vents from continuous unit operations—records for vents with a flow rate less than 0.005 standard cubic meter per minute.* The owner or operator who elects to comply by maintaining a flow rate less than 0.005 standard cubic meter per minute under § 63.113(f), shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) that increase the process vent stream flow rate;

(ii) Any recalculation or measurement of the flow rate pursuant to § 63.115(e); and

(iii) If the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d).

(5) *Process vents from continuous unit operations—records for vents with an organic HAP concentration less than 50 parts per million.* The owner or operator who elects to comply by maintaining an organic HAP concentration less than 50 parts per million by volume organic HAP concentration under § 63.113(g) shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) that increase the organic HAP concentration of the process vent stream;

(ii) Any recalculation or measurement of the concentration pursuant to § 63.115(e); and

(iii) If the organic HAP concentration increases to 50 parts per million by volume or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d).

(g) *Notification of Compliance Status.* The owner or operator of an affected source shall submit the information specified in paragraphs (g)(1) through (3) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1439(e)(5).

(1) For the owner or operator complying with the process vent control requirements in § 63.1425(b), (c)(1), (c)(3), or (d), the information specified in paragraph (b) of this section related to the compliance demonstration, and the information specified in paragraph (c) of this section related to the establishment of parameter monitoring levels,

(2) For each PMPU where the combination of process vents from batch unit operations that are associated with the use of nonexpoxide organic HAP to make or modify the product is Group 2, the information related to the group determination specified in paragraph (e)(1) of this section.

(3) For each process vent from a continuous unit operation that is associated with the use of nonexpoxide organic HAP to make or modify the product that is Group 2, the information related to the group determination specified in paragraph (e)(2) of this section.

(h) *Periodic Reports.* The owner or operator of an affected source shall

submit Periodic Reports of the recorded information specified in paragraphs (h)(1) through (9) of this section, as appropriate, according to the schedule for submitting Periodic Reports in § 63.1439(e)(6)(i).

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraph (d)(2) of this section were above the maximum, or below the minimum, level established in the Notification of Compliance Status or operating permit.

(2) Reports of the duration of periods when monitoring data are not collected for each excursion caused by insufficient monitoring data as defined in § 63.1438(f)(1)(iv), (f)(2)(i)(B), or (f)(3)(ii).

(3) Reports of the times and durations of all periods recorded under paragraph (d)(3) of this section when the process vent stream is diverted from the combustion, recovery, or recapture device through a bypass line and if applicable, the information in paragraph (h)(7) of this section. Include the start date, start time, and duration in hours of each period.

(4) Reports of all periods recorded under paragraph (d)(4) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out and if applicable, the information in paragraph (h)(7) of this section. Include the start date, start time, and duration in hours of each period.

(5) Except as specified in § 63.1436(a), reports of the times and durations of all periods recorded under paragraph (d)(1)(i) of this section in which all pilot flames of a flare were absent. Include the start date, start time, and duration in hours of each period.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (d)(1)(ii) of this section were above the maximum, or below the minimum, levels established in the Notification of Compliance Status or operating permit. Include the identification of the carbon bed, the monitored parameter that was outside the established range, and the start date, start time, and duration in hours of the regeneration cycle.

(7) Beginning no later than the compliance dates specified in § 63.1422(h), the owner or operator shall comply with this paragraph (h)(7) in addition to the requirements in paragraphs (h)(3) and (4) of this section. For bypass lines subject to the requirements in § 63.1429(c), the Periodic Report shall include the start date, start time, duration in hours,

estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume, and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(8) For process vents in ethylene oxide service subject to the requirements of § 63.1426(g), the Periodic Report shall include the records for periods specified in paragraph (d)(7)(ii) of this section. Indicate the start date and time and end date and time for each period.

(9) For any maintenance vent release exceeding the applicable limits in § 63.1425(h)(1), the Periodic Report shall include the information specified in paragraphs (h)(9)(i) through (iv) of this section. For the purposes of this reporting requirement, if an owner or operator complies with § 63.1425(h)(1)(iv), then the owner or operator shall report each venting event conducted under those provisions and include an explanation for each event as to why utilization of this alternative was required.

(i) Identification of the maintenance vent and the equipment served by the maintenance vent.

(ii) The date and time the maintenance vent was opened to the atmosphere.

(iii) The LEL in percent, vessel pressure in psig, or mass in pounds of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5-psig vessel pressure option in § 63.1425(h)(1)(ii) was used and active purging was initiated while the concentration of the vapor was 10 percent or greater of its LEL, also include the concentration of the vapors at the time active purging was initiated.

(iv) An estimate of the mass in pounds of organic HAP released during the entire atmospheric venting event.

(i) *Reports of process changes.*

Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 combination of batch process vents at a PMPU that are associated with the use of nonepoxide organic HAP to make or modify the product to become Group 1, the owner or operator shall submit a report within 180 days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report or in a separate submittal to the Administrator, as specified in § 63.1439(e)(6)(iii)(D)(1). A description of the process change shall be submitted with the report.

(j) *Reporting requirements for Group 2 continuous process vents.* (1) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with a TRE greater than 4.0 to become a Group 2 continuous process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the flow rate is less than 0.005 standard cubic meters per minute. The report may be submitted as part of the next periodic report. The report shall include:

(i) A description of the process change;

(ii) The results of the recalculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and

(iii) A statement that the owner or operator will comply with the process vent monitoring requirements specified in § 63.1429, as appropriate.

(2) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with a flow rate less than 0.005 standard cubic meters per minute to become a Group 2 continuous process vent with a flow rate of 0.005 standard cubic meters per minute or greater, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the organic HAP concentration is less than 50 ppmv. The report may be submitted as part of the next periodic report. The report shall include:

(i) A description of the process change;

(ii) The results of the calculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and

(iii) A statement that the owner or operator will comply with the process vent monitoring requirements specified in § 63.1429, as appropriate.

(3) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with an organic HAP concentration less than 50 ppmv to become a Group 2 continuous process vent with an organic HAP concentration of 50 ppmv or greater and a TRE index value less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the flow rate is less than 0.005 standard cubic meters per minute. The report may be

submitted as part of the next periodic report. The report shall include:

- (i) A description of the process change;
 - (ii) The results of the calculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and
 - (iii) A statement that the owner or operator will comply with the process vent monitoring requirements specified in § 63.1429, as appropriate.
- (k) *Alternative requests.* If an owner or operator uses a combustion, recovery, or recapture device other than those specified in the process vent monitoring requirements in § 63.1429(a)(1) through (7) and listed in table 5 or 6 to this

subpart; requests approval to monitor a parameter other than those specified in § 63.1429(a)(1) through (7) and listed in table 5 or 6 to this subpart; or uses ECO and requests to monitor a parameter other than those listed in § 63.1427(i)(1)(i) through (iii), as allowed under § 63.1427(i)(1)(iv), the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.1439(f)(3), as part of the Precompliance Report as required under § 63.1439(e)(4), or to the Administrator as a separate submittal. The Administrator will specify appropriate reporting and recordkeeping

requirements as part of the review of the Precompliance Report.

- 14. Amend § 63.1431 by revising paragraphs (c)(1)(iii) and (c)(2) to read as follows:

§ 63.1431 Process vent annual epoxides emission factor plan requirements.

* * * *

(c) * * *

(1) * * *

(iii) Annual emissions after the combustion, recovery, or recapture device. The expected annual emissions after control shall be determined using the following equation:

Equation 1 to Paragraph (c)(1)(iii)

$$AE_{\text{control}} = (AE_{\text{uncontrolled}}) \left[\left(1 - \frac{R}{100} \right) \right] \quad [\text{Equation 15}]$$

Where:

AE_{control} = Annual epoxide emissions after control, kg/yr.

$AE_{\text{uncontrolled}}$ = Annual uncontrolled epoxide emissions, determined in accordance with paragraph (c)(1)(i) of this section, kg/yr.

R = Expected control efficiency of the combustion, recovery, or recapture device, percent, as determined in § 63.1426(c).

* * * *

(2) The owner or operator shall conduct a performance test in accordance with § 63.1426(c) to determine the epoxide control efficiency of the combustion, recovery, or recapture device. The owner or operator shall then recalculate the annual epoxide emissions after control using Equation 1 to Paragraph (c)(1)(iii) of this section, except that the control efficiency, R, shall be the measured control efficiency. This information shall be submitted as part of the Notification of Compliance Status, as provided in § 63.1439(e)(5).

* * * *

- 15. Amend § 63.1432 by revising paragraph (a), and adding paragraphs (r) through (w) to read as follows:

§ 63.1432 Storage vessel provisions.

(a) For each storage vessel located at an affected source, the owner or operator shall comply with the HON storage vessel requirements of §§ 63.119 through 63.123 and the HON leak inspection provisions in § 63.148, with the differences noted in paragraphs (b) through (q) of this section and, beginning March 18, 2026, paragraphs (r) through (w) of this section, for the purposes of this subpart.

* * * *

(r) Substitute “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),” for each occurrence of “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(10),”. Owners and operators of a storage vessel with an internal floating roof subject to § 63.119(b)(5)(ix), (x), (xi), and (xii) in accordance with this paragraph may install the required upgraded deck fittings and controls for guidepoles the next time the storage vessel is emptied and degassed, or no later than March 18, 2036.

(s) For storage vessels in ethylene oxide service:

(1) Substitute “in ethylene oxide service, as defined in § 63.101” with “in ethylene oxide service, as defined in § 63.1423”.

(2) Substitute “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),” for each occurrence of “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(11),”.

(3) To demonstrate compliance for storage vessels in ethylene oxide service, as defined in § 63.1423, and establish the parameter monitoring level(s), owners or operators shall meet the requirements in § 63.124 (in addition to the HON storage vessel requirements specified in this section), except as specified in paragraphs (s)(3)(i) and (ii) of this section.

(i) Substitute “§ 63.100(k)(11)” with “§ 63.1422(h)”.

(ii) Substitute “§ 63.108” with “§ 63.1436”.

(t) Substitute “§ 63.1420(h)(4)” for each occurrence of “§ 63.102(f) of subpart F of this part”.

(u) Substitute “§ 63.1436” for each occurrence of “§ 63.108”.

(v) The phrase “, and PRDs in ethylene oxide service,” in § 63.119(a)(7)(ii) does not apply for purposes of this subpart.

(w) Section 63.119(b)(7) does not apply.

- 16. Amend § 63.1433 by revising paragraph (a) introductory text and paragraph (a)(1), and adding paragraphs (a)(21) through (26) to read as follows:

§ 63.1433 Wastewater provisions.

(a) *Process wastewater.* Except as specified in paragraph (c) of this section, the owner or operator of each affected source shall comply with the HON wastewater requirements in §§ 63.132 through 63.147 for each process wastewater stream originating at an affected source, with the HON leak inspection requirements in § 63.148, and with the HON requirements in § 63.149 for equipment that is subject to § 63.149, with the differences noted in paragraphs (a)(1) through (20) of this section and, beginning March 18, 2026, paragraphs (a)(21) through (26) of this section. Further, the owner or operator of each affected source shall comply with the requirements of § 63.105(a) for maintenance wastewater, as specified in paragraph (b) of this section.

(1) Owners and operators of affected sources are not required to comply with the HON new source wastewater requirements in § 63.132(b)(1) and (d) for the purposes of this subpart. Owners or operators of all new affected sources, as defined in this subpart, shall comply with the HON requirements for existing

sources in §§ 63.132 through 63.149, with the exceptions noted in paragraphs (a)(2) through (26) of this section.

* * * * *

(21) Substitute “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(10),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(22) Substitute “pressure relief devices are subject to the requirements specified in § 63.165(e) of subpart H of this part” with “pressure relief devices are subject to the requirements specified in § 63.1434(c),”.

(23) For wastewater in ethylene oxide service:

(i) Substitute “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(11),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(ii) Substitute “in ethylene oxide service, as defined in § 63.101” with “in ethylene oxide service, as defined in § 63.1423”.

(iii) § 63.138(b)(3) and (c)(3) do not apply. Instead, for each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), for Group 1 wastewater streams in ethylene oxide service, you must comply with one of the treatment options specified in paragraph (a)(23)(iii)(A), (B), or (C) of this section in addition to the control device requirements specified in § 63.138(a)(5). Individual wastewater streams may be excluded from this requirement if their combined ethylene oxide load in the wastewater prior to treatment is less than 1.0 megagram per year, provided you comply with paragraph (a)(23)(iii)(D) of this section.

(A) Reduce the concentration of ethylene oxide of each wastewater stream, by removal or destruction, to a level less than 1 ppmw. If you choose to comply with this paragraph (a)(23)(iii)(A) of this section, then you must demonstrate compliance using procedures specified in § 63.145(b), except the parenthetical sentence at the end of § 63.145(b) does not apply, and when “§ 63.138(b)(1) and § 63.138(c)(1)” are referred to in § 63.145(b), it means this paragraph (a)(23)(iii)(A) of this section.

(B) Comply with § 63.138(d). If you choose to comply with this paragraph (a)(23)(iii)(B) of this section, then neither a design evaluation nor a performance test is required in accordance with § 63.145(a)(1).

(C) Comply with § 63.138(e). You may not use a design evaluation as specified in § 63.145(a)(2) to demonstrate compliance with this paragraph (a)(23)(iii)(C) of this section. Instead, to demonstrate compliance with this paragraph (a)(23)(iii)(C) of this section, you must conduct a performance test as specified in § 63.145(c) or (d).

(D) If you exclude individual wastewater streams from compliance with paragraph (a)(23)(iii) of this section based on combined ethylene oxide load prior to treatment, then you must conduct annual sampling of each wastewater stream using the procedures specified in §§ 63.144(b)(5)(i)(I) and 63.145(b), except the parenthetical sentence at the end of § 63.145(b) does not apply and when “§ 63.138(b)(1) and § 63.138(c)(1)” are referred to in § 63.145(b), it means this paragraph (a)(23)(iii)(D) of this section.

(24) Substitute “For each source as defined in § 63.101,” with “For each affected source as described in § 63.1420(a),”.

(25) Substitute “§ 63.108” with “§ 63.1436”.

(26) Substitute “Except for pressure relief devices subject to § 63.165(e)(4),” with “Except for pressure relief devices subject to § 63.1434(c),”.

* * * * *

■ 17. Amend § 63.1434 by revising the section heading, paragraphs (a), (b), and (f), and adding paragraph (i) to read as follows:

§ 63.1434 Equipment leak and transfer rack provisions.

(a) The owner or operator of each affected source shall comply with the HON equipment leak requirements in 40 CFR part 63, subpart H for all equipment in organic HAP service, except §§ 63.165 and 63.184, any recordkeeping and reporting related to §§ 63.165 and 63.184, as specified in paragraphs (b) through (h) of this section, and beginning March 18, 2026, as specified in paragraphs (a)(1) through (7) of this section.

(1) Substitute “For each source as defined in § 63.101, and for each source as defined in § 63.191, on and after July 15, 2027,” with “For each affected source as described in § 63.1420(a), on and after March 18, 2029,”.

(2) Except as specified in paragraph (a)(7) of this section, substitute “For each source as defined in § 63.101, and for each source as defined in § 63.191, beginning no later than the compliance dates specified in § 63.100(k)(10),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(3) For equipment in ethylene oxide service:

(i) Substitute “in ethylene oxide service, as defined in § 63.101” with “in ethylene oxide service, as defined in § 63.1423”.

(ii) Substitute “For each source as defined in § 63.101, and for each source as defined in § 63.191, beginning no later than the compliance dates specified in § 63.100(k)(11),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(iii) Except as specified in paragraph (a)(3)(iv)(B) of this section, if § 63.174(b)(3)(vi) refers to “once every month,” then substitute it for “once every quarter;” otherwise, § 63.174(b)(3)(vi) applies as written.

(iv) § 63.171 does not apply for light liquid pumps in ethylene oxide service, gas/vapor and light liquid valves in ethylene oxide service, and gas/vapor and light liquid connectors in ethylene oxide service. Instead, when leaks have been detected, delay of repair beyond 15 days is allowed if you meet the requirements in paragraphs (a)(3)(iv)(A) and (B) of this section, or paragraph (a)(3)(iv)(C) of this section.

(A) For PMPUs with less than 5,000 pieces of equipment in ethylene oxide service, you may have no more than 5 pieces of equipment in ethylene oxide service on delay of repair at a given time. For PMPUs with more than 5,000 pieces of equipment in ethylene oxide service, you may have no more than 0.1-percent of equipment in ethylene oxide service on delay of repair at a given time.

(B) Equipment in ethylene oxide service that is on delay of repair must be monitored monthly, following the monitoring requirements at § 63.180(b), and the instrument reading must not indicate that a delay of repair leak is detected. A delay of repair leak is defined as an instrument reading of 1,000 parts per million or greater. If a delay of repair leak is detected, then the delay of repair provisions no longer apply and the leak must be fixed no later than 15 calendar days after the delay of repair leak is detected.

(C) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in ethylene oxide service. Equipment that is isolated from the process is not applicable to the requirements in paragraphs (a)(3)(iv)(A) and (B) of this section.

(4) Substitute “Except for pressure relief devices subject to § 63.165(e)(4),”

with “Except for pressure relief devices subject to paragraph (c) of this section.”.

(5) Substitute “§ 63.108” with “§ 63.1436”.

(6) For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), the requirements specified in § 63.168(b)(2)(i) through (iii) for valves that are either in gas service or in light liquid service no longer apply. Instead, for valves that are either in gas service or in light liquid service, a leak is detected if the instrument reading equals or exceeds 100 ppmv.

(7) Beginning no later than the compliance dates specified in § 63.1422(h), § 63.170 no longer applies. Instead, if a gaseous emission stream from a surge control vessel or bottoms receiver is considered a process vent as defined in § 63.1423, you must comply with either paragraph (a)(7)(i) or (ii) of this section.

(i) Route the organic vapors vented from the surge control vessel or bottoms receiver to a fuel gas system or process with a closed vent system meeting the requirements in § 63.119(f); or

(ii) Comply with § 63.1425 through 63.1431, as applicable.

(b) Except as specified in paragraphs (a)(1) through (3) and (a)(6) and (7) of this section, the compliance date for the equipment leak provisions in this section is provided in § 63.1422(d).

* * * * *

(f) The Periodic Reports required by § 63.182(a)(3) and (d) shall be submitted as part of the Periodic Reports required by § 63.1439(e)(6).

* * * * *

(i) For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), the owner or operator of each transfer rack that does not meet the criteria specified in § 63.1420(c)(10) or (11) shall comply with the HON transfer rack requirements in §§ 63.126 through 63.130 and the HON leak inspection provisions in § 63.148, with the differences noted in paragraphs (i)(1) through (13) of this section.

(1) When the term “Group 1 transfer rack” is used in §§ 63.126 through 63.130, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(2) When the term “Group 2 transfer rack” is used in §§ 63.126 through 63.130, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(3) When “organic hazardous air pollutants,” “organic HAP’s,” or

“organic HAP” are used in §§ 63.126 through 63.130, the definition of “Organic hazardous air pollutant(s) (organic HAP)” shall apply for the purposes of this subpart.

(4) Sections 63.126(d) and (h)(1), and 63.128(d) do not apply.

(5) The phrase “subject to this subpart” means 40 CFR part 63, subpart PPP.

(6) When the term “range” is used in §§ 63.126 through 63.130, the term “level” shall be used instead, for the purposes of this subpart. This level shall be determined using the procedures specified in parameter monitoring procedures in § 63.1438.

(7) The owner or operator of an affected source shall comply with this paragraph (i)(7) instead of § 63.128(a)(1) for the purposes of this subpart. If the combustion, recovery, or recapture device used to comply with § 63.126(b) is also used to comply with any of the requirements found in §§ 63.1425 through 63.1431 and/or § 63.1433, the performance test required in or accepted by §§ 63.1425 through 63.1431 and/or § 63.1433 is acceptable for demonstrating compliance with § 63.126(b), for the purposes of this subpart.

(8) When § 63.152(b) is referred to in §§ 63.127, 63.128, and 63.129, the Notification of Compliance Status requirements contained in § 63.1439(e)(5) shall apply for the purposes of this subpart.

(9) When § 63.152(c) is referred to in §§ 63.128, 63.129, and 63.130, the Periodic Report requirements contained in § 63.1439(e)(6) shall apply for the purposes of this subpart.

(10) Substitute “For each source as defined in § 63.101, on and after July 15, 2027,” with “For each affected source as described in § 63.1420(a), on and after March 18, 2029.”.

(11) Substitute “For each source as defined in § 63.101, beginning no later than the compliance dates specified in § 63.100(k)(10),” with “For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h),”.

(12) Substitute “Beginning no later than the compliance dates specified in § 63.100(k)(10),” with “Beginning no later than the compliance dates specified in § 63.1422(h),”.

(13) Substitute “§ 63.108” with “§ 63.1436”.

■ 18. Amend § 63.1435 by revising paragraph (a) and adding paragraphs (f) through (i) to read as follows:

§ 63.1435 Heat exchanger provisions.

(a) The owner or operator of each affected source shall comply with the

requirements of § 63.104 for heat exchange systems, with the exceptions noted in paragraphs (b) through (e) of this section and, beginning March 18, 2026, in paragraphs (f) through (i) of this section.

* * * * *

(f) Substitute “For each source as defined in § 63.101,” with “For each affected source as described in § 63.1420(a),”.

(g) Substitute “beginning no later than the compliance dates specified in § 63.100(k)(10)” with “beginning no later than the compliance dates specified in § 63.1422(h).”

(h) If an owner or operator complies with § 63.104(g), then § 63.104(b) through (e) no longer apply.

(i) For heat exchange systems in ethylene oxide service:

(1) Substitute “in ethylene oxide service, as defined in § 63.101” with “in ethylene oxide service, as defined in § 63.1423”.

(2) § 63.104(g)(6) does not apply. Instead, for heat exchange systems in ethylene oxide service, the monitoring frequency is monthly.

(3) § 63.104(h)(6) does not apply. Instead, for heat exchange systems in ethylene oxide service, owners and operators must repair the leak to reduce the concentration or mass emissions rate to below the applicable leak action level as soon as practicable, but no later than 45 days after the sample was collected.

(4) Section 63.104(k) does not apply. Instead for each source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), owners and operators must not inject water into or dispose of water through any heat exchange system in a PMPU if the water contains any amount of ethylene oxide, has been in contact with any process stream containing ethylene oxide, or is considered wastewater as defined in § 63.1423.

■ 19. Revise § 63.1436 to read as follows:

§ 63.1436 Flares.

(a) For any flare that is used to reduce organic HAP emissions from a PMPU, the owner or operator may elect to comply with the requirements in this section in lieu of the requirements of § 63.11(b) and the requirements referenced therein. However, beginning no later than the compliance dates specified in § 63.1422(h), the provisions specified in paragraphs (a)(1) through (25) of this section no longer apply. Instead, if an owner or operator reduces organic HAP emissions from a PMPU by venting emissions through a closed vent system to a steam-assisted, air-assisted,

or non-assisted flare, then the owner or operator must meet the applicable requirements for flares as specified in §§ 63.670 and 63.671, including the provisions in tables 12 and 13 to subpart CC of this part, except as specified in paragraph (b) of this section. This requirement also applies to any flare using fuel gas from a fuel gas system, of which 50 percent or more of the fuel gas is derived from a PMPU, as determined on an annual average basis. For purposes of compliance with this paragraph, the following terms are defined in § 63.641: Assist air, assist steam, center steam, combustion zone, combustion zone gas, flare, flare purge gas, flare supplemental gas, flare sweep gas, flare vent gas, lower steam, net heating value, perimeter assist air, pilot gas, premix assist air, total steam, and upper steam.

- (1) Section 63.1426(a)(1);
- (2) Section 63.1429(a)(2);
- (3) Section 63.1437(c)(1) through (3);
- (4) Section 63.107(h)(9)(i) related to criteria in § 63.11(b);
- (5) Section 63.113(a)(1);
- (6) Section 63.114(a)(2);
- (7) Section 63.116(a)(1) through (3);
- (8) Section 63.117(a)(5)(i) through (iii);
- (9) Section 63.118(f)(5);
- (10) The last sentence in § 63.119(e)(1) related to flares;
- (11) Section 63.120(e)(1) through (6);
- (12) Section 63.122(c)(2) and (g)(3);
- (13) Section 63.126(b)(2)(i);
- (14) Section 63.127(a)(2);
- (15) Section 63.128(b)(1) through (3);
- (16) Section 63.129(a)(5)(i) through (iii);
- (17) Section 63.130(a)(2)(i), (c), and (d)(5);
- (18) Section 63.139(c)(3) and (d)(3);
- (19) Section 63.145(j)(1) through (3);
- (20) Section 63.146(b)(7)(i)(A) through (C);
- (21) Section 63.147(d)(1);
- (22) Section 63.172(d);
- (23) Section 63.180(e)(1) through (3);
- (24) Section 63.181(g)(1)(iii); and
- (25) The phrase “including periods when a flare pilot light system does not have a flame” in § 63.181(g)(2)(i).

(b) The exceptions specified in § 63.108(b) through (o) apply, except as specified in paragraphs (b)(1) through (7) of this section.

(1) Where the term “chemical manufacturing process unit” is used, the term “PMPU” applies instead for the purposes of this subpart.

(2) Where the reference “§ 63.100(k)(10)” is used, the reference § 63.1422(h) applies instead for the purposes of this subpart.

(3) Where the phrase “Hazardous Organic Chemical Manufacturing Sector

Lead” is used, the phrase “Polyether Polyols Sector Lead” applies instead for the purposes of this subpart.

(4) Where the reference “§ 63.152(b)(7)” is used, the reference “§ 63.1439(e)(5)(ix)” applies instead for the purposes of this subpart.

(5) Instead of the address given in § 63.108(n), the address to submit the alternative means of limitation request is U.S. EPA, Attn: Polyether Polyols Sector Lead, Mail Drop: E143–01, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, NC 27711.

(6) When requesting an alternative under 63.1426(a)(2) in accordance with § 63.670(r), substitute “the flare achieves 96.5 percent combustion efficiency (or 98 percent destruction efficiency)” with “the flare achieves a control efficiency greater than 98 percent”.

(7) Section 63.670(o)(2) does not apply. Instead, flare management plans must be submitted to the Administrator in a supplement to the Notification of Compliance Status report in accordance with § 63.1439(e)(5). The plan should be updated periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system, but the plan needs to be re-submitted to the Administrator only if the owner or operator alters the design smokeless capacity of the flare. The owner or operator must comply with the updated plan as submitted.

■ 20. Amend § 63.1437 by revising introductory text of paragraphs (a) and (c), and adding paragraph (c)(4) to read as follows:

§ 63.1437 Additional requirements for performance testing.

(a) Initial and subsequent performance testing shall be conducted in accordance with § 63.7(a)(1), (a)(3), (d), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (4) of this section and the additions specified in paragraph (b) of this section. If a performance test has never been conducted, conduct an initial performance test no later than the compliance dates specified in § 63.1422(h). Beginning no later than the compliance dates specified in § 63.1422(h), conduct subsequent performance tests no later than the compliance dates specified in § 63.1422(h) or 60 calendar months after the previous performance test, whichever is later. Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being

tested. Representative conditions exclude periods of start-up and shutdown unless specified by the Administrator or an applicable subpart. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent the entire range of normal operation, including operational conditions for maximum emissions if such emissions are not expected during maximum production. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

* * * * *

(c) Notwithstanding any other provision of this subpart, if an owner or operator of an affected source uses a flare to comply with any of the requirements of this subpart, the owner or operator shall comply with paragraphs (c)(1) through (3) of this section, except as specified in paragraph (c)(4) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration. If a compliance demonstration has been conducted previously for a flare, using the techniques specified in paragraphs (c)(1) through (3) of this section, that compliance demonstration may be used to satisfy the requirements of this paragraph if either no deliberate process changes have been made since the compliance demonstration, or the results of the compliance demonstration reliably demonstrate compliance despite process changes.

* * * * *

(4) For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), paragraphs (c)(1) through (3) of this section no longer apply and instead the owner or operator of the affected source shall comply with § 63.1436 for the flare.

■ 21. Amend § 63.1438 by revising paragraph (a) introductory text, paragraphs (a)(3), (b)(2), (f)(1)(i), and (f)(3)(i) to read as follows:

§ 63.1438 Parameter monitoring levels and excursions.

(a) *Establishment of parameter monitoring levels.* The owner or operator of a combustion, recovery, or recapture device that has one or more parameter monitoring level

requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter. Except for process vents and storage vessels in ethylene oxide service subject to §§ 63.1426(g) and 63.1432(s), if a performance test is required by this subpart for a combustion, recovery, or recapture device, the owner or operator shall use the procedures in either paragraph (b) or (c) of this section to establish the parameter monitoring level(s). For process vents and storage vessels in ethylene oxide service subject to §§ 63.1426(g) and 63.1432(s), the owner or operator shall use the procedures specified in § 63.124 to establish the parameter monitoring level(s). Except for flares subject to § 63.1436, if a performance test is not required by this subpart for a combustion, recovery, or recapture device, the owner or operator may use the procedures in paragraph (b), (c), or (d) of this section to establish the parameter monitoring levels. For flares subject to § 63.1436, the owner or operator shall use the procedures specified in § 63.1436 to establish the parameter monitoring levels. When using the procedures specified in paragraph (c) or (d) of this section, the owner or operator shall submit the information specified in § 63.1439(e)(4)(viii) for review and approval, as part of the Precompliance Report.

* * * * *

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of 40 CFR part 63, subparts A, F, G, H, or CC.

(b) * * *

(2) *Process vents from batch unit operations.* For process vents from batch unit operations, during initial compliance testing, the appropriate parameter shall be monitored continuously during the entire test period. The monitoring level(s) shall be those established during the compliance test.

* * * * *

(f) * * *

(1) * * *

(i) The daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters or, for parameters used to comply with § 63.1425(g) or 63.1432(s)(3), when the 1-hour block average value of one or more monitored parameters is above the maximum level

or below the minimum level established for the given parameters.

* * * * *

(3) * * *

(i) When the daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters or, for parameters used to comply with § 63.1425(g) or 63.1432(s)(3), when the 1-hour block average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

* * * * *

■ 22. Revise § 63.1439 to read as follows:

§ 63.1439 General recordkeeping and reporting provisions.

(a) *Data retention.* Unless otherwise specified in this subpart, the owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years. All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provide access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on microfilm, computer, floppy disk, magnetic tape, or microfiche. Before May 18, 2026, if an owner or operator submits copies of reports to the applicable EPA Regional Office, the owner or operator is not required to maintain copies of reports. Before May 18, 2026, if the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(b) *Subpart A requirements.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in 40 CFR part 63, subpart A (the General Provisions) as specified in table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (2) of this section.

(1) *Malfunction recordkeeping and reporting.* Before March 18, 2029, keep the records and report events as specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) *Records of malfunctions.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time, and duration of each failure.

(B) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

(C) Record actions taken to minimize emissions in accordance with § 63.1420(h)(4), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(ii) *Reports of malfunctions.* If a source fails to meet an applicable standard, report such events in the Periodic Report. Report the number of failures to meet an applicable standard. For each instance, report the date, time, and duration of each failure. For each failure the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

(2) *Application for approval of construction or reconstruction.* For new affected sources, the owner or operator shall comply with the General Provisions' requirements for the application for approval of construction or reconstruction, as specified in § 63.5, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii).

(c) *Subpart H requirements.* The owner or operator of an affected source shall comply with the HON equipment leak reporting and recordkeeping requirements in subpart H of this part, except as specified in § 63.1434(a) through (h). Additionally, for equipment in ethylene oxide service, the owner or operator shall keep a count of the equipment in ethylene oxide service and records of the information specified in paragraphs (c)(1) through (4) of this section for each piece of equipment in ethylene oxide service that is placed on delay of repair.

(1) The date that delay of repair began.

(2) The date and instrument reading of each monitoring event.

(3) The date of successful repair.

(4) If the equipment that is isolated from the process such that it is no longer in ethylene oxide service, the date of isolation.

(d) *Recordkeeping and documentation.* The owner or operator required to keep continuous records shall keep records as specified in

paragraphs (d)(1) through (11) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) of this section, and except as provided in paragraph (h) of this section. If a monitoring plan for storage vessels pursuant to § 63.1432(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (d)(1) through (11) of this section apply. As described in § 63.1432(i), certain storage vessels are not required to keep continuous records as specified in this paragraph. The owner or operator of such storage vessels shall keep records as specified in the monitoring plan required by § 63.1432(i).

(1) The monitoring system shall measure data values at least once during approximately equal 15-minute intervals.

(2) The owner or operator shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. The owner or operator of process vents from batch unit operations shall record each measured data value.

(3) Daily average values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (ii) of this section, except as specified in paragraphs (d)(6) and (7) of this section.

(i) The daily average value shall be calculated as the average of all parameter values recorded during the operating day, except as specified in paragraph (d)(7) of this section. The calculated average shall cover a 24-hour period if operation is continuous. If intermittent emissions episodes occur resulting in emissions being vented to a combustion, recapture, or recovery device for a period of less than 24 hours in the operating day, the daily average shall be calculated based only on the period when emissions are being vented to the combustion, recapture, or recovery device. For example, if a batch unit operation operates such that emissions are vented to a combustion device for 6 hours, then the daily average is the average of the temperature measurements taken during those 6 hours.

(ii) The operating day shall be the 24-hour period that the owner or operator specifies in the operating permit or the Notification of Compliance Status, for

purposes of determining daily average values.

(4)–(5) [Reserved]

(6) If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average for that operating day.

(7) Monitoring data recorded during periods identified in paragraphs (d)(7)(i) and (ii) of this section shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or combustion, recovery, or recapture device operation when monitors are not operating.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments; or

(ii) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(8) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks, and records documenting the maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or that are specified in other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(9) The owner or operator of an affected source granted a waiver of recordkeeping or reporting requirements under the General Provisions' recordkeeping and reporting requirements in § 63.10(f) shall maintain the information, if any, specified by the Administrator as a condition of the waiver of recordkeeping or reporting requirements.

(10) For pressure relief devices in organic HAP service, keep records of the information specified in paragraphs (d)(10)(i) through (v) of this section, as applicable.

(i) A list of identification numbers for pressure relief devices that the owner or operator elects to equip with a closed-vent system and control device, subject to the provisions in § 63.1434(c)(4).

(ii) A list of identification numbers for pressure relief devices subject to the provisions in § 63.1434(c)(1).

(iii) A list of identification numbers for pressure relief devices equipped

with rupture disks, subject to the provisions in § 63.1434(c)(2)(ii).

(iv) The dates and results of the Method 21 of appendix A of part 60 to this chapter, monitoring following a pressure release for each pressure relief device subject to the provisions in § 63.1434(c)(1) and (2). The results shall include:

(A) The background level measured during each compliance test.

(B) The maximum instrument reading measured at each piece of equipment during each compliance test.

(v) For pressure relief devices in organic HAP service subject to § 63.1434(c)(3), keep records of each pressure release to the atmosphere, including the following information:

(A) The source, nature, and cause of the pressure release.

(B) The start date, start time, and duration in minutes of the pressure release.

(C) The quantity of total HAP emitted during the pressure release and the calculations used for determining this quantity.

(D) The actions taken to prevent this pressure release.

(E) The measures adopted to prevent future such pressure releases.

(11) Beginning no later than March 18, 2029, the owner or operator shall keep records of excursions of an applicable standard. For each excursion, record the start date, start time, duration in hours, cause, a list of the affected sources or equipment, whether the excursion occurred during a period of startup, shutdown, or malfunction, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, actions taken to minimize emissions in accordance with § 63.1420(h)(4), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(e) *Reporting and notification.* In addition to the reports and notifications required by 40 CFR part 63, subpart A, as specified in this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (9) of this section, as applicable. All reports required by this subpart, and the schedule for their submittal, are listed in table 8 of this subpart.

(1) *Violation of reporting requirements.* Owners and operators shall not be in violation of the reporting requirements of this paragraph (e) for failing to submit information required to be included in a specified report if the owner or operator meets the requirements in paragraphs (e)(1)(i)

through (iii) of this section. Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping, or reporting.

(i) The information was not known in time for inclusion in the report specified by this subpart.

(ii) The owner or operator has been diligent in obtaining the information.

(iii) The owner or operator submits a report according to the provisions of paragraphs (e)(1)(iii)(A) through (C) of this section.

(A) If this subpart expressly provides for supplements to the report in which the information is required, the owner or operator shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained, unless otherwise specified in this subpart.

(B) If this subpart does not expressly provide for supplements, but the owner or operator must submit a request for revision of an operating permit pursuant to the state operating permit programs in part 70 of this chapter or the Federal operating permit programs in part 71 of this chapter, due to circumstances to which the information pertains, the owner or operator shall submit the information with the request for revision to the operating permit.

(C) In any case not addressed by paragraph (e)(1)(iii)(A) or (B) of this section, the owner or operator shall submit the information with the first Periodic Report, as required by this subpart, which has a submission deadline at least 60 days after the information is obtained.

(2) *Submittal of reports.* All reports required under this subpart shall be sent to the Administrator at the applicable address listed in the General Provisions' list of addresses of state air pollution control agencies and EPA Regional Offices, in § 63.13 unless otherwise specified in this subpart. If acceptable to both the Administrator and the owner or operator of a source, reports not otherwise required to be submitted electronically may be submitted electronically or on electronic media.

(3) *Initial Notification.* The owner or operator of a new affected source shall submit an Initial Notification to the Administrator containing the information described in paragraph (e)(3)(i) of this section according to the schedule in paragraph (e)(3)(ii) of this section. The General Provisions' Initial Notification requirements in § 63.9(b)(2)

and (3) shall not apply for the purposes of this subpart.

(i) The Initial Notification shall include the following information:

(A) The name and address of the owner or operator;

(B) The address (physical location) of the affected source;

(C) An identification of the kinds of emission points within the affected source;

(D) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; and

(E) A statement of whether or not the affected source is a major source.

(ii) The Initial Notification shall be submitted according to the schedule in paragraph (e)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) [Reserved]

(B) For a new source that has an initial start-up on or after August 30, 1999, the application for approval of construction or reconstruction required by the General Provisions in § 63.5(d) shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practical before construction or reconstruction is planned to commence (but it need not be sooner than August 30, 1999). For a new source that reclassifies to major source status after January 19, 2021, and greater than 90 days after the initial start-up, the source shall submit the initial notification required by 63.9(b) no later than 120 days after the source becomes subject to this subpart.

(C) For a new source that has an initial start-up prior to August 30, 1999, the Initial Notification shall be submitted no later than August 30, 1999, or no later than 120 days after the source becomes subject to this subpart, whichever is later. The application for approval of construction or reconstruction described in the General Provisions' requirements in § 63.5(d) is not required for these sources.

(4) *Precompliance Report.* The owner or operator of an affected source requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; or requesting approval to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d) shall submit a Precompliance Report according to the schedule described in paragraph (e)(4)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(4)(ii) through (viii) of this section, as appropriate.

(i) The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. For new affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section. Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(4)(vii) of this section. To submit a Precompliance Report for the first time after the compliance date to request an extension for compliance; request approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; or request approval to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d), the owner or operator shall notify the Administrator at least 90 days before the planned change is to be implemented; the change shall be considered approved if the Administrator either approves the change in writing, or fails to disapprove the change in writing within 45 days of receipt.

(ii) A request for an extension for compliance, as specified in § 63.1422(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in the General Provisions' compliance requirements in § 63.6(i)(6)(i)(A) and (B), as required in § 63.1422(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted in the Precompliance Report if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in 40 CFR part 63, subpart G, or seeks to comply by monitoring a different parameter than those specified in this subpart or in 40 CFR part 63, subpart G.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the owner or operator shall submit a request for approval in the Precompliance Report.

(v) The owner or operator shall report the intent to use an alternative emission standard to comply with the provisions of this subpart in the Precompliance

Report. The Administrator may deem an alternative emission standard to be equivalent to the standard required by the subpart, under the procedures outlined in the General Provisions' requirements for use of an alternative nonopacity emission standard, in § 63.6(g).

(vi) [Reserved]

(vii) Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(4)(vii)(A) of this section, or as specified in paragraph (e)(4)(vii)(B) of this section. Unless the Administrator objects to a request submitted in a supplement to the Precompliance Report within 45 days after its receipt, the request shall be deemed approved.

(A) Supplements to the Precompliance Report may be submitted to clarify or modify information previously submitted.

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(4)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(4)(iv) of this section; or to use alternative controls, as specified in paragraph (e)(4)(v) of this section.

(viii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in the parameter monitoring provisions in § 63.1438(c) or (d), the following information shall be submitted in the Precompliance Report:

(A) Identification of which procedures (*i.e.*, § 63.1438(c) or (d)) are to be used; and

(B) A description of how the parameter monitoring level is to be established. If the procedures in § 63.1438(c) are to be used, a description of how performance test data will be used shall be included.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 days after the compliance dates specified in § 63.1422. Beginning May 18, 2026, the owner or operator must submit all Notification of Compliance Status reports in PDF format to the EPA following the procedure specified in § 63.9(k). For equipment leaks subject to § 63.1434, the owner or operator shall submit the information specified in the HON equipment leak Notification of Compliance Status requirements in § 63.182(c), in the Notification of Compliance Status required by this paragraph. For all other emission points, including heat exchange systems, the Notification of Compliance Status shall

contain the information listed in paragraphs (e)(5)(i) through (vii) of this section. For pressure relief devices subject to the requirements of § 63.1434(c)(3), the owner or operator shall submit the information listed in paragraph (e)(5)(viii) of this section in the Notification of Compliance Status within 150 days after the first applicable compliance date for pressure relief device monitoring. For flares subject to the requirements in § 63.1436, owners and operators shall also submit the information in paragraph (e)(5)(ix) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for flare monitoring. For process vents subject to the requirements of § 63.1426(g), storage vessels subject to the requirements of § 63.1432(s), wastewater subject to the requirements of § 63.1433(a)(23), and heat exchange systems subject to the requirements of § 63.1435(i), owners and operators shall also submit the information in paragraph (e)(5)(x) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date. For adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, the owner or operator shall also submit the information listed in paragraph (e)(5)(xi) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date.

(i) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, continuous monitoring system performance evaluations, any other information required by the test method to be in the test report used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in a Notification of Compliance Status under the requirements for overlapping regulations in § 63.1422(j), the HON storage vessel reporting provisions in § 63.122 and the storage vessel provisions in § 63.1432, the HON transfer rack reporting provisions in §§ 63.129 and 63.130, and the HON process wastewater reporting provisions in § 63.146. In addition, the owner or operator shall comply with paragraphs (e)(5)(i)(A) and (B) of this section.

(A) For performance tests, group determinations, or determination that controls are needed, the Notification of Compliance Status shall include one complete test report, except as specified in paragraph (e)(5)(i)(B) of this section,

for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other information required by the test method to be in the test report shall be submitted, but a complete test report is not required.

(B) If the performance test results have been submitted electronically through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with paragraph (e)(9) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the Notification of Compliance Status report in lieu of the performance test results. The performance test results shall be submitted to CEDRI by the date the Notification of Compliance Status report is submitted. A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards (if the owner or operator prepares the standards), record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method to be in the test report.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under the HON process vent monitoring requirements in § 63.114(e) and the process vent monitoring requirements in § 63.1429(d), the HON process wastewater parameter monitoring requirements in § 63.143(f), the HON transfer rack parameter monitoring requirements in § 63.127(e), paragraph (e)(8) of this section, or paragraph (f) of this section, the information specified in paragraphs (e)(5)(ii)(A) through (C) of this section shall be submitted. Further, as described in the storage vessel provisions in § 63.1432(k), for those storage vessels for which the parameter monitoring plan (required to be submitted under the HON Notification of Compliance Status requirements for storage vessels in § 63.120(d)(3)) specifies compliance with the parameter monitoring provisions of § 63.1438, the owner or operator shall provide the information specified in paragraphs (e)(5)(ii)(A) through (C) of this section for each monitoring parameter. For those storage vessels for which the parameter monitoring plan required to

be submitted under the HON Notification of Compliance Status requirements for storage vessels in § 63.120(d)(2) does not require compliance with the provisions of § 63.1438, the owner or operator shall provide the information specified in § 63.120(d)(3) as part of the Notification of Compliance Status.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates that the combustion, recovery, or recapture device is operated in a manner to ensure compliance with the provisions of this subpart.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values of monitored parameters.

(iii) The determination of applicability for flexible operation units as specified in § 63.1420(e)(1)(iii).

(iv) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in § 63.1420(e)(5)(ii)(A).

(v) The results for each predominant use determination made under § 63.1420(f)(1) through (7), for storage vessels assigned to an affected source subject to this subpart.

(vi) If any emission point is subject to this subpart and to other standards as specified in § 63.1422(j), and if the provisions of § 63.1422(j) allow the owner or operator to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(vii) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to § 63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility. An owner or operator who transfers a Group 1 process vent for disposal pursuant to § 63.113(i) shall include in the

Notification of Compliance Status the name and location of the transferee, and the identification of the Group 1 process vent.

(viii) For pressure relief devices in organic HAP service, a description of the device or monitoring system to be implemented, including the pressure relief devices and process parameters to be monitored (if applicable), a description of the alarms or other methods by which operators will be notified of a pressure release, and a description of how the owner or operator will determine the information to be recorded under paragraphs (d)(10)(v)(B) and (C) of this section (*i.e.*, the duration of the pressure release and the methodology and calculations for determining of the quantity of total HAP emitted during the pressure release).

(ix) For flares subject to the requirements in § 63.1436, the supplement to the Notification of Compliance Status shall include flare management plans, flare design (*e.g.*, steam-assisted, air-assisted, non-assisted, or pressure-assisted multi-point); all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the initial visible emissions demonstration required by § 63.670(h), as applicable; and all periods during the compliance determination when the pilot flame or flare flame is absent.

(x) For process vents subject to the requirements of § 63.1426(g), storage vessels subject to the requirements of § 63.1432(s), wastewater subject to the requirements of § 63.1433(a)(23), and heat exchange systems subject to the requirements of § 63.1435(i), the supplement to the Notification of Compliance Status shall identify all process vents, storage vessels, wastewater streams, and heat exchange systems that are in ethylene oxide service, identify the method(s) used to control ethylene oxide emissions from each process vent, storage vessel, and wastewater stream (*i.e.*, use of a flare, scrubber, or other control device), and include the information specified in paragraphs (e)(5)(x)(A) through (D) of this section, as applicable.

(A) For process vents, all uncontrolled, undiluted ethylene oxide concentration measurements, and the calculations used to determine the total uncontrolled ethylene oxide mass emissions rate for the sum of all vent gas streams.

(B) For storage vessels, include the concentration of ethylene oxide of the fluid stored in each storage vessel.

(C) For wastewater, include the concentration of ethylene oxide of each

wastewater stream. If you comply with § 63.1433(a)(23)(iii)(D), identify each individual wastewater stream, the combined ethylene oxide load prior to treatment, and how the combined ethylene oxide load was determined.

(D) For heat exchange systems, include the concentration of ethylene oxide of the process fluid cooled by the heat exchange system.

(xi) For adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, the supplement to the Notification of Compliance Status shall include the information listed in paragraphs (e)(5)(xi)(A) and (B) of this section.

(A) Whether the adsorber cannot be regenerated or is a regenerative adsorber(s) that is regenerated offsite.

(B) The breakthrough limit and adsorber bed life established during the initial performance test or design evaluation of the adsorber.

(6) *Periodic Reports.* For existing and new affected sources, the owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (x) of this section. In addition, for equipment leaks subject to § 63.1434, the owner or operator shall submit the information specified in the HON periodic reporting requirements in § 63.182(d) as part of the Periodic Report required by this paragraph (e)(6), and for heat exchange systems subject to § 63.1434, the owner or operator shall submit the information specified in the HON heat exchange system reporting requirements in § 63.104(f)(2) as part of the Periodic Report required by this paragraph (e)(6). On and after March 18, 2029 or once the reporting template for this subpart has been available on the CEDRI website for 1 year, whichever date is later, owners and operators shall submit all subsequent reports following the procedure specified in § 63.9(k). Owners and operators shall use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under §§ 63.9(i) and 63.10(a), the report shall be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(i) Except as specified in paragraphs (e)(6)(viii) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or paragraphs (e)(6)(iii) through (vii) of this section, as appropriate, shall be submitted

semiannually no later than 60 days after the end of each 180-day period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period. All periodic reports shall contain the company name and address (including county), as well as the beginning and ending dates of the reporting period.

(ii) If none of the compliance exceptions in paragraphs (e)(6)(iii) through (vii) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that there were no compliance exceptions, as described in this paragraph, for the 6-month period covered by that report and that none of the activities specified in paragraphs (e)(6)(iii) through (vii) of this section occurred during the period covered by that report.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.1432, 63.1433, and 63.1434(i) for any emission point, Periodic Reports shall include:

(A) All information specified in the HON periodic reporting requirements in § 63.122(a)(4) for storage vessels and in § 63.146(c) through (f) for process wastewater. In addition, if you comply with § 63.1433(a)(23)(iii)(D) and annual sampling shows that the combined ethylene oxide load of the excluded wastewater streams prior to treatment is 1.0 megagram per year or greater, you must document this in the Periodic Report and also include the actual combined ethylene oxide load prior to treatment, how the combined load was determined, and sampling dates and results for each wastewater stream contributing to the combined load. Beginning no later than the compliance dates specified in § 63.1422(h), include all information specified in § 63.130(d) for transfer racks. Beginning no later than the compliance dates specified in § 63.1422(h), for storage vessels in ethylene oxide service subject to the requirements of § 63.124, the Periodic Report must include the information specified in § 63.123(k)(2). Indicate the start date, start time, and duration in hours for each period.

(B) The daily average values or, for parameters used to comply with § 63.1425(g) or 63.1432(s)(3), the 1-hour block average values of monitored parameters for all excursions, as defined in § 63.1438(f). Beginning no later than the compliance dates specified in § 63.1422(h), for each excursion, report the start date, start time, duration in

hours, cause, a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, actions taken to minimize emissions, and any corrective action taken to return the affected unit to its normal or usual manner of operation.

(C) The periods when monitoring data were not collected shall be specified and, beginning no later than the compliance dates specified in § 63.1422(h), including start date, start time, and duration in hours; and

(D) The information in paragraphs (e)(6)(iii)(D)(1) through (3) of this section, as applicable:

(1) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. This notification may be submitted at any time.

(2) Notification if one or more emission points (other than equipment leak components subject to § 63.1434), or one or more PMPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(2)(i) and (ii) of this section.

(i) A description of the addition to the affected source.

(ii) Notification of the group status or control requirement for the additional emission point or all emission points in the PMPU.

(3) For gas streams sent for disposal pursuant to § 63.113(i) or for process wastewater streams sent for treatment pursuant to § 63.132(g), reports of changes in the identity of the treatment facility or transferee.

(E) Before March 18, 2029, the information in paragraph (b)(1)(ii) of this section for reports of malfunctions.

(iv) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using

the same method, results and any other information required by the test method to be in the test report shall be submitted, but a complete test report is not required.

(C) If the performance test results have been submitted electronically through CEDRI in accordance with paragraph (e)(9) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted must be submitted in the Period Report in lieu of the information required in paragraphs (e)(6)(iv)(A) and (B) of this section. The performance test results must be submitted to CEDRI by the date the Periodic Report is submitted.

(v) The results for each change made to a primary product determination for a PMPU made under § 63.1420(e)(3) or (10).

(vi) The results for each reevaluation of the applicability of this subpart to a storage vessel that begins receiving material from (or sending material to) a process unit that was not included in the initial determination, or a storage vessel that ceases to receive material from (or send material to) a process unit that was included in the initial determination, in accordance with § 63.1420(f)(8).

(vii) The Periodic Report required by the equipment leak provisions in § 63.1434(f) shall be submitted as part of the Periodic Report required by paragraph (e)(6) of this section. Additionally, for equipment in ethylene oxide service, you must include the information in paragraphs (e)(6)(vii)(A) through (E) of this section in the Periodic Report. If there are more than five pieces of equipment in ethylene oxide service on delay of repair during the reporting period, include the total number of pieces of equipment in ethylene oxide service in the Periodic Report.

(A) Identification of each piece of equipment that is on delay of repair during the reporting period.

(B) The date that delay of repair began for each piece of equipment.

(C) An indication of whether the equipment has been successfully repaired, and if so, the date of successful repair (remonitoring date).

(D) An indication of whether the equipment has been isolated from the process such that it is no longer in ethylene oxide service, and if so, the date that the equipment was successfully isolated from the process.

(E) An indication of whether any monthly monitoring event resulted in an instrument reading of 1,000 parts per million or greater, and if so, the date of the monitoring event.

(viii) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections as specified in paragraphs (e)(6)(viii)(A) through (D) of this section.

(A) The owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point or process section if the emission point or process section meets the conditions in paragraph (e)(6)(viii)(A)(1) or (2) of this section.

(1) A combustion, recovery, or recapture device for a particular emission point or process section has one or more excursions, as defined in § 63.1438(f), in two consecutive semiannual reporting periods; or

(2) The Administrator requests the owner or operator to submit quarterly reports for that emission point or process section.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (vii) of this section, as applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(viii)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year without one or more excursions occurring (during that year), the owner or operator may return to semiannual reporting for the emission point or process section.

(ix) For pressure relief devices in organic HAP service, Periodic Reports must include the information specified in paragraphs (e)(6)(ix)(A) through (C) of this section.

(A) For pressure relief devices in organic HAP service subject to § 63.1434(c), report confirmation that all monitoring to show compliance was conducted within the reporting period.

(B) For pressure relief devices in organic HAP gas or vapor service subject to § 63.1434(c)(2), report any instrument reading of 500 ppm above background or greater, more than 5 calendar days after the pressure release.

(C) For pressure relief devices in organic HAP service subject to § 63.1434(c)(3), report each pressure release to the atmosphere, including the following information:

(1) The source, nature, and cause of the pressure release.

(2) The start date, start time, and duration in minutes of the pressure release.

(3) The quantity of total HAP emitted during the pressure release and the method used for determining this quantity.

(4) The actions taken to prevent this pressure release.

(5) The measures adopted to prevent future such pressure releases.

(x) The information specified in § 63.108(l)(2) according to § 63.1436(b).

(7) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) through (iii) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.1432 shall be submitted, as specified in the HON storage vessel provisions in § 63.122(h)(1) and (2).

(ii) When the conditions at § 63.1420(e)(3)(iii), (e)(9), or (e)(10) are met, reports of changes to the primary product for a PMPU or process unit, as required by § 63.1420(e)(3)(iii), (e)(9), or (e)(10)(iii), respectively, shall be submitted.

(iii) Owners or operators of PMPU or emission points (other than equipment leak components subject to § 63.1434) that are subject to provisions for changes or additions to plant sites in § 63.1420(g)(1) or (2) shall submit a report as specified in paragraphs (e)(7)(iii)(A) and (B) of this section.

(A) Reports shall include:

(1) A description of the process change or addition, as appropriate;

(2) The planned start-up date and the appropriate compliance date, according to § 63.1420(g)(1) or (2); and

(3) Identification of the group status of emission points (except equipment leak components subject to the requirements in § 63.1434) specified in paragraphs (e)(7)(iii)(A)(3)(i) through (iii) of this section, as applicable.

(i) All the emission points in the added PMPU, as described in § 63.1420(g)(1).

(ii) All the emission points in an affected source designated as a new affected source under § 63.1420(g)(2)(i).

(iii) All the added or created emission points as described in § 63.1420(g)(2)(ii) or (iii).

(4) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, alternative controls, or wishes to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d), a Precompliance Report shall be submitted in accordance with paragraph (e)(7)(iii)(B) of this section.

(B) Reports shall be submitted as specified in paragraphs (e)(7)(iii)(B)(1)

through (3) of this section, as appropriate.

(1) Owners or operators of an added PMPU subject to § 63.1420(g)(1) shall submit a report no later than 180 days prior to the compliance date for the PMPU.

(2) Owners or operators of an affected source designated as a new affected source under § 63.1420(g)(2)(i) shall submit a report no later than 180 days prior to the compliance date for the affected source.

(3) Owners and operators of any emission point (other than equipment leak components subject to § 63.1434) subject to § 63.1420(g)(2)(ii) or (iii) shall submit a report no later than 180 days prior to the compliance date for those emission points.

(8) *Operating permit application.* An owner or operator who submits an operating permit application instead of a Precompliance Report shall submit the information specified in paragraph (e)(4) of this section, as applicable, with the operating permit application.

(9) *Electronic reporting of performance tests and performance evaluations.*

(i) Within 60 days after the date of completing each performance test (as defined in § 63.2), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by this subpart following the procedure specified in § 63.9(k). Submit the data in a file format generated using the EPA's Electronic Reporting Tool (ERT). Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) accompanied by the other information required by § 63.7(g)(2) in PDF format.

(ii) Beginning no later than May 18, 2026, within 60 days after the date of completing each continuous emissions monitoring system performance evaluation that includes a relative accuracy test audit, you must submit the results of the performance evaluation following the procedure specified in § 63.9(k). The results must be in a file format generated using the EPA's Electronic Reporting Tool (ERT). Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) accompanied by the other information required by § 63.7(g)(2) in PDF format.

(f) *Alternative monitoring parameters.* The owner or operator who has been directed by any section of this subpart, or any section of another subpart referenced by this subpart, that specifically references this paragraph to set unique monitoring parameters, or who requests approval to monitor a different parameter than those listed in § 63.1432 for storage vessels, § 63.1427 for ECO, § 63.1429 for process vents, or § 63.143 for process wastewater shall submit the information specified in paragraphs (f)(1) through (3) of this section in the Precompliance Report, as required by paragraph (e)(4) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the combustion, recovery, or recapture device; control technique; or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(2) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

(3) The required information shall include a description of the proposed monitoring, recordkeeping, and reporting system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (ii) of this section is met:

(i) If monitoring and recordkeeping is not continuous; or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the continuous parameter operating and recordkeeping provisions listed in

§ 63.1429 for process vents, and § 63.1433 for wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(4)(iv) of this section, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in the General Provisions requirements for the use of an alternative monitoring method in § 63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once during approximately equal 15-minute intervals and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (ii) of this section.

(i) The requested system shall include visual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily averages shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the affected source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration that the proposed monitoring frequency is sufficient to represent combustion, recovery, or recapture device operating conditions, considering typical variability of the specific process and combustion, recovery, or recapture device operating parameter being monitored.

(3) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once at approximately equal intervals of about 15 minutes), but that records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (g)(3)(i) and (ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once during

approximately equal 15-minute intervals;

(B) Record at least four values each hour during periods of operation;

(C) Record the date and time when monitors are turned off or on;

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident;

(E) Calculate daily average values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.1438(f), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain:

(A) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in the General Provisions' requirements for using an alternative monitoring method in § 63.8(f)(4).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (h)(1) or (2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions that would otherwise apply under this subpart. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (2) of this section.

(1) The owner or operator may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (iv) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation (e.g., a temperature reading of -200°C on a boiler), and will alert the operator by alarm or other means. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) and (B) of this section. All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits; and

(B) The running average is based on at least six 1-hour average values.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation, except in circumstances where the presence of unchanging data are the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm or other means, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (C) of this section. The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting

the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (D) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (h) of this section.

(B) A description of the applicable monitoring system(s), and how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description, as specified in paragraph (h)(1)(vi)(D) of this section.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (h)(1) of this section.

(D) The owner or operator subject to paragraph (h)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or

operator is no longer required to record the daily average value, for any operating day when the daily average is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next Periodic Report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily average values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraph (h)(1) of this section, for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation.

(iv) For the purposes of paragraph (h) of this section, an excursion means that the daily average of monitoring data for a parameter is greater than the maximum, or less than the minimum established value.

■ 23. Revise tables 1 through 3 to subpart PPP of part 63 to read as follows:

TABLE 1 TO SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to subpart PPP	Explanation
§ 63.1(a)(1)	Yes	§ 63.1423 specifies definitions in addition to or that supersede definitions in § 63.2.
§ 63.1(a)(2)	Yes.	

TABLE 1 TO SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
§ 63.1(a)(3)	Yes	§ 63.1422(f) through (k) of this subpart and § 63.160(b) identify those standards which overlap with the requirements of subparts PPP and H and specify how compliance shall be achieved.
§ 63.1(a)(4)	Yes	Subpart PPP (this table) specifies the applicability of each paragraph in subpart A to subpart PPP.
§ 63.1(a)(5)	No	Reserved.
§ 63.1(a)(6)	Yes.	
§ 63.1(a)(7)–(9)	No	Reserved.
§ 63.1(a)(10)	Yes.	
§ 63.1(a)(11)	Yes.	
§ 63.1(a)(12)–(14)	Yes.	
§ 63.1(b)(1)	No	§ 63.1420(a) contains specific applicability criteria.
§ 63.1(b)(2)	Yes.	
§ 63.1(b)(3)	Yes.	
§ 63.1(c)(1)	Yes	Subpart PPP (this table) specifies the applicability of each paragraph in subpart A to subpart PPP.
§ 63.1(c)(2)	No	Area sources are not subject to subpart PPP.
§ 63.1(c)(3)	No	Reserved.
§ 63.1(c)(4)	No	Reserved.
§ 63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications overridden by this table.
§ 63.1(c)(6)	Yes.	
§ 63.1(d)	No	Reserved.
§ 63.1(e)	Yes.	
§ 63.2	Yes	§ 63.1423 specifies those subpart A definitions that apply to subpart PPP.
§ 63.3	Yes.	
§ 63.4(a)(1)–(3)	Yes.	
§ 63.4(a)(4)	No	Reserved.
§ 63.4(a)(5)	Yes.	
§ 63.4(b)	Yes.	
§ 63.4(c)	Yes.	
§ 63.5(a)(1)	Yes	Except the terms “source” and “stationary source” should be interpreted as having the same meaning as “affected source.”
§ 63.5(a)(2)	Yes.	
§ 63.5(b)(1)	Yes	Except § 63.1420(g) defines when construction or reconstruction is subject to new source standards.
§ 63.5(b)(2)	No	Reserved.
§ 63.5(b)(3)	Yes.	
§ 63.5(b)(4)	Yes	Except that the initial notification requirements in § 63.1439(e)(3) shall apply instead of the requirements in § 63.9(b).
§ 63.5(b)(5)	Yes.	
§ 63.5(b)(6)	Yes	Except that § 63.1420(g) defines when construction or reconstruction is subject to the new source standards.
§ 63.5(c)	No	Reserved.
§ 63.5(d)(1)(i)	Yes.	
§ 63.5(d)(1)(ii)	Yes	Except that § 63.5(d)(1)(ii)(H) does not apply.
§ 63.5(d)(1)(iii)	No	§ 63.1439(e)(5) and § 63.1434(e) specify notification of compliance status requirements.
§ 63.5(d)(2)	No.	
§ 63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply, and equipment leaks subject to § 63.1434 are exempt.
§ 63.5(d)(4)	Yes.	
§ 63.5(e)	Yes.	
§ 63.5(f)(1)	Yes.	
§ 63.5(f)(2)	Yes	Except that where § 63.9(b)(2) is referred to, the owner or operator need not comply.
§ 63.6(a)	Yes.	
§ 63.6(b)(1)	Yes.	
§ 63.6(b)(2)	Yes.	
§ 63.6(b)(3)	Yes.	
§ 63.6(b)(4)	Yes.	
§ 63.6(b)(5)	Yes.	
§ 63.6(b)(6)	No	Reserved.
§ 63.6(b)(7)	No.	
§ 63.6(c)(1)	Yes	§ 63.1422 specifies the compliance date.
§ 63.6(c)(2)	No.	
§ 63.6(c)(3)	No	Reserved.
§ 63.6(c)(4)	No	Reserved.
§ 63.6(c)(5)	Yes.	
§ 63.6(d)	No	Reserved.
§ 63.6(e)(1)(i)	No	See § 63.1420(h)(4) for general duty requirement.
§ 63.6(e)(1)(ii)	No.	
§ 63.6(e)(1)(iii)	Yes.	
§ 63.6(e)(2)	No	Reserved.
§ 63.6(e)(3)	No.	
§ 63.6(f)(1)	No.	
§ 63.6(f)(2)	Yes	Except § 63.7(c), as referred to in § 63.6(f)(2)(iii)(D) does not apply, and except that § 63.6(f)(2)(ii) does not apply to equipment leaks subject to § 63.1434.

TABLE 1 TO SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
§ 63.6(f)(3)	Yes.	
§ 63.6(g)	Yes.	
§ 63.6(h)	No	Subpart PPP does not require opacity and visible emission standards.
§ 63.6(i)(1)	Yes.	
§ 63.6(i)(2)	Yes.	
§ 63.6(i)(3)	Yes.	
§ 63.6(i)(4)(i)(A)	Yes.	
§ 63.6(i)(4)(i)(B)	No	Dates are specified in § 63.1422(e) and § 63.1439(e)(4)(i) for all emission points except equipment leaks, which are covered under § 63.182(a)(6)(i).
§ 63.6(i)(4)(ii)	No.	
§ 63.6(i)(5)–(14)	Yes.	
§ 63.6(i)(15)	No	Reserved.
§ 63.6(i)(16)	Yes.	
§ 63.6(j)	Yes.	
§ 63.7(a)(1)	Yes.	
§ 63.7(a)(2)	No	§ 63.1439(e) (5) and (6) specify the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration results are reported in the Periodic Reports.
§ 63.7(a)(3)	Yes.	
§ 63.7(a)(4)	Yes.	
§ 63.7(b)	No	§ 63.1437(a)(4) specifies notification requirements.
§ 63.7(c)	No	Except if the owner or operator chooses to submit an alternative nonopacity emission standard for approval under § 63.6(g).
§ 63.7(d)	Yes.	
§ 63.7(e)(1)	No	See § 63.1437(a).
§ 63.7(e)(2)	Yes.	
§ 63.7(e)(3)	No	Subpart PPP specifies requirements. See § 63.1426(c) and (g).
§ 63.7(e)(4)	Yes.	
§ 63.7(f)	Yes	Since a site-specific test plan is not required, the notification deadline in § 63.7(f)(2)(i) shall be 60 days prior to the performance test, and in § 63.7(f)(3) approval or disapproval of the alternative test method shall not be tied to the site-specific test plan.
§ 63.7(g)	Yes	Except the notification of compliance status report requirements in § 63.1439(e)(5) shall apply instead of those in §§ 63.9(h) and 63.1439(e)(9) specified how and when to submit performance test and performance evaluation results. In addition, equipment leaks subject to § 63.1434 are not required to conduct performance tests.
§ 63.7(h)	Yes	Except § 63.7(h)(4)(ii) is not applicable, since the site-specific test plans in § 63.7(c)(2) are not required.
§ 63.8(a)(1)	Yes.	
§ 63.8(a)(2)	No.	
§ 63.8(a)(3)	No	Reserved.
§ 63.8(a)(4)	Yes	Except for flares subject to § 63.1436.
§ 63.8(b)(1)	Yes.	
§ 63.8(b)(2)	No	Subpart PPP specifies locations to conduct monitoring.
§ 63.8(b)(3)	Yes.	
§ 63.8(c)(1)	Yes.	
§ 63.8(c)(1)(i)	No	See § 63.1420(h)(4) for general duty requirement.
§ 63.8(c)(1)(ii)	No.	
§ 63.8(c)(1)(iii)	No.	
§ 63.8(c)(2)	Yes.	
§ 63.8(c)(3)	Yes.	
§ 63.8(c)(4)	No	§ 63.1438 specifies monitoring requirements; not applicable to equipment leaks, because § 63.1434 does not require continuous monitoring systems.
§ 63.8(c)(5)–(8)	No.	
§ 63.8(d)	No.	
§ 63.8(e)	Yes	Yes, but only applies for CEMS, except this subpart specifies how and when the performance evaluation results are reported.
§ 63.8(f)(1)–(3)	Yes.	
§ 63.8(f)(4)(i)	Yes	Except the timeframe for submitting request is specified in § 63.1439(f) or (g); not applicable to equipment leaks, because § 63.1434 (through subpart H of this part) specifies acceptable alternative methods.
§ 63.8(f)(4)(ii)	Yes.	
§ 63.8(f)(4)(iii)	Yes.	
§ 63.8(f)(5)(i)	Yes.	
§ 63.8(f)(5)(ii)	No.	
§ 63.8(f)(5)(iii)	Yes.	
§ 63.8(f)(6)	Yes	Subpart PPP does not require CEMS except it allows the option to use CEMS for process vents and storage vessels in ethylene oxide service.
§ 63.8(g)	Yes	Applies only to CEMS. Other data reduction procedures specified in § 63.1439(d) and (h); not applicable to equipment leaks.
§ 63.9(a)	Yes.	
§ 63.9(b)	No	The initial notification requirements are specified in § 63.1439(e)(3).
§ 63.9(c)	Yes.	

TABLE 1 TO SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
§ 63.9(d)	Yes.	
§ 63.9(e)	No	§ 63.1437(a)(4) specifies notification deadline.
§ 63.9(f)	No	Subpart PPP does not require opacity and visible emission standards.
§ 63.9(g)	No.	
§ 63.9(h)	No	§ 63.1439(e)(5) specifies notification of compliance status requirements.
§ 63.9(i)	Yes.	
§ 63.9(j)	Yes	For change in major source status only.
§ 63.9(k)	Yes.	
§ 63.10(a)	Yes.	
§ 63.10(b)(1)	No	§ 63.1439(a) specifies record retention requirements.
§ 63.10(b)(2)	No	This subpart specifies recordkeeping requirements including in §§ 63.1430(a) and 63.1439(b).
§ 63.10(b)(3)	Yes.	
§ 63.10(c)	No	§ 63.1439 specifies recordkeeping requirements.
§ 63.10(d)(1)	Yes.	
§ 63.10(d)(2)	No	§ 63.1439(e)(9) specifies performance test reporting requirements; not applicable to equipment leaks.
§ 63.10(d)(3)	No	Subpart PPP does not require opacity and visible emission standards.
§ 63.10(d)(4)	Yes.	
§ 63.10(d)(5)	No	This subpart specifies reporting requirements in § 63.1439.
§ 63.10(e)	No	§ 63.1439 specifies reporting requirements.
§ 63.10(f)	Yes.	
§ 63.11	Yes	Except § 63.11(b) does not apply as specified in § 63.1436.
§ 63.12	Yes	Except that the authority of § 63.177 (for equipment leaks) will not be delegated to states.
§ 63.13–63.15	Yes.	

TABLE 2 TO SUBPART PPP OF PART 63—APPLICABILITY OF HON AND GROUP 1 POLYMERS AND RESINS PROVISIONS TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to subpart PPP	Explanation	Applicable section of subpart PPP
Subpart F:			
§ 63.100	No.		
§ 63.101	Yes	Several definitions from § 63.101 are referenced at § 63.1423	§ 63.1423
§§ 63.102–63.103	No.		
§ 63.104	Yes	With the differences noted in § 63.1435(b) through (i)	§ 63.1435.
§ 63.105	Yes	With the differences noted in § 63.1433(b)	§ 63.1433.
§ 63.106	No.		
Subpart G:			
§ 63.107	No.		
§ 63.108	Yes	With the differences noted in § 63.1436(b).	
§ 63.109	Yes	With the differences noted in the definition of “in ethylene oxide service” in § 63.1423(b).	
§ 63.110	No.		
§ 63.111	No.		
§ 63.112	No.		
§§ 63.113–63.118	Yes	For THF facilities, with the differences noted in § 63.1425(f)(1) through (15).	§ 63.1425.
	No	For epoxide facilities, except that § 63.115(d) is used for TRE determinations.	§ 63.1428.
§§ 63.119–63.123	Yes	With the differences noted in § 63.1432(b) through 63.1432(w)	§ 63.1432.
§ 63.124	Yes	With the differences noted in §§ 63.1426(g) and 63.1432(w)	§§ 63.1426 and 63.1432.
§ 63.125	No	Reserved.	
§§ 63.126–63.130	Yes	With the differences noted in paragraphs § 63.1434(i)(1) through (13).	§ 63.1434.
§ 63.131	No	Reserved.	
§§ 63.132–63.147	Yes	With the differences noted in § 63.1433(a)(1) through (26)	§ 63.1433.
§§ 63.148–63.149	Yes	With the differences noted in § 63.1432(b) through (v) and 63.1433(a)(1) through (26).	§§ 63.1432 and 63.1433.
§ 63.150	No.		
§§ 63.151–63.152	No.		
§ 63.153	No	§ 63.1421.	
Subpart H:			
§§ 63.160–63.182	Yes	Subpart PPP affected sources shall comply with all requirements of subpart H to this part, with the differences noted in §§ 63.1422(d) and 63.1434.	§ 63.1434.
§ 63.183	No	§ 63.1421.	
§ 63.184	No.		
Subpart U:			

TABLE 2 TO SUBPART PPP OF PART 63—APPLICABILITY OF HON AND GROUP 1 POLYMERS AND RESINS PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation	Applicable section of subpart PPP
§§ 63.480–63.487	No.	Portions of § 63.488(b) and (e) are cross-referenced in subpart PPP.	
§ 63.488	Yes		
§§ 63.489–63.506	No.		

TABLE 3 TO SUBPART PPP OF PART 63—GROUP 1 STORAGE VESSELS AT EXISTING AND NEW AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure ^a (kilopascals)
75 ≤ capacity <151 ^b	^b ≥13.1
38 ≤ capacity <151 ^c	^c ≥6.9
capacity ≥151	≥5.2

^a Maximum true vapor pressure of total organic HAP at storage temperature.

^b Beginning no later than the compliance dates specified in § 63.1422(h), these vessel capacity and vapor pressure criteria no longer apply.

^c Beginning no later than the compliance dates specified in § 63.1422(h), these vessel capacity and vapor pressure criteria apply.

- 24. Amend table 4 to subpart PPP of part 63 by adding entries “Butylene Oxide” and “(106887)” after the entry “(106990)” to read as follows:

TABLE 4 TO SUBPART PPP OF PART 63—KNOWN ORGANIC HAP FROM POLYETHER POLYOL PRODUCTS

Organic HAP/chemical name [CAS No.]
Butylene Oxide. (106887).

- 25. Revise tables 5 and 6 to subpart PPP of part 63 to read as follows:

TABLE 5 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator, other than a thermal oxidizer used to comply with § 63.1425(g).	Firebox temperature ^a	1. Continuous records as specified in § 63.1429. ^b 2. Record and report the average firebox temperature measured during the performance test—NCS. ^c 3. Record the daily average firebox temperature as specified in § 63.1429. 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR. ^{d,e}
Thermal oxidizer used to comply with § 63.1425(g).	Combustion chamber temperature [§§ 63.124(b)(5)(i) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the combustion chamber temperature averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block average combustion chamber temperature for each operating day. 4. Report all 1-hour block temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	Flue gas flow rate [§§ 63.124(b)(5)(ii) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the flue gas flow rate averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block average flue gas flow rate for each operating day. 4. Report all 1-hour block flue gas flow rates that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}

TABLE 5 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1429.^b 2. Record and report the average upstream and downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test—NCS.^c 3. Record the daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.1429. 4. Report all daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR.^{d,e} 5. Report all daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR.^{d,e} 6. Report all instances when monitoring data are not collected.^e
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the process vents are <i>not</i> introduced with or used as the primary fuel.	Firebox temperature ^a	1. Continuous records as specified in § 63.1429.^b 2. Record and report the average firebox temperature measured during the performance test—NCS.^c 3. Record the daily average firebox temperature as specified in § 63.1429.^d 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.^{d,e}
Flare (if meeting the requirements of § 63.1426(a)(1)).	Presence of a flame at the pilot light	1. Hourly records of whether the monitor was continuously operating during batch emission episodes selected for control and whether a flame was continuously present at the pilot light during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.^c 3. Record the times and durations of all periods during batch emission episodes when all flames at the pilot light of a flare are absent or the monitor is not operating. 4. Report the times and durations of all periods during batch emission episodes selected for control when all flames at the pilot light of a flare are absent—PR.^d
Flare (if meeting the requirements of § 63.1426(a)(2)).	The parameters are specified in §§ 63.108 and 63.1436.	1. Records as specified in §§ 63.108(m) and 63.1436. 2. Report information as specified in §§ 63.108(l) and 63.1436—PR.^d
Absorber ^f	Liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber.	1. Records every 15 minutes, as specified in § 63.1429.^b 2. Record and report the average liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber, measured during the performance test—NCS. 3. Record the liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber, every 15 minutes, as specified in § 63.1429. 4. Report all scrubber flow rates or pressure drop values that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.^{d,e}
	pH of the scrubber	1. Once daily records as specified in § 63.1429.^b 2. Record and report the average pH of the scrubber effluent measured during the performance test—NCS.^c 3. Record at least once daily the pH of the scrubber effluent. 4. Report all pH scrubber effluent readings out of the range established in the NCS or operating permit and all instances when monitoring data are not collected—PR.^{d,e} If a base absorbent is used, report all pH values that are below the minimum operating values. If an acid absorbent is used, report all pH values that are above the maximum operating values.
Condenser ^f	Exit (product side) temperature	1. Continuous records as specified in § 63.1429.^b 2. Record and report the average exit temperature measured during the performance test—NCS. 3. Record the daily average exit temperature as specified in § 63.1429. 4. Report all daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.^{d,e}
Carbon Adsorber ^f	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s), and.	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the performance test—NCS.^c 3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is above the maximum flow rate established in the NCS or operating permit—PR.^{d,e}
	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s). 2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s) measured during the performance test—NCS.^c 3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum temperature established in the NCS or operating permit—PR.^{d,e}
	Outlet HAP or TOC concentration	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator shall record each outlet HAP or TOC concentration measured according to § 63.1429(a)(9)(i) and (ii).
	Adsorbent replacement	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator must record date and time the adsorbent was last replaced.

TABLE 5 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Scrubber with a reactant tank used to comply with § 63.1425(g).	Breakthrough	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator must: 1. Record breakthrough limit and bed life established according to § 63.1429(a)(9)(i). 2. Report the date of each instance when breakthrough, as defined in § 63.101, is detected between the first and second adsorber and the adsorber is not replaced according to § 63.1429(a)(9)(iii)(A)—PR. ^g
	Liquid-to-gas ratio [§§ 63.124(b)(4)(i) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the L/G of the scrubber averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block L/G of the scrubber for each operating day. 4. Report all 1-hour block L/G values of the scrubber that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	In lieu of liquid-to-gas ratio, scrubber total liquid flow rate and gas flow rate through scrubber [§§ 63.124(b)(4)(i) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report both the total scrubber liquid flow rate and gas flow rate through the scrubber averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block total scrubber liquid flow rate and each 1-hour block gas flow rate through the scrubber for each operating day. 4. Report all 1-hour block total scrubber liquid flow rate values and all 1-hour block gas flow rate through the scrubber values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	pH of liquid in reactant tank [§§ 63.124(b)(4)(ii) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the pH of liquid in reactant tank averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block pH of liquid in reactant tank for each operating day. 4. Report all 1-hour block values of the pH of liquid in reactant tank that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	Pressure drop [§§ 63.124(b)(4)(iii) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the pressure drop of the scrubber averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block pressure drop of the scrubber for each operating day. 4. Report all 1-hour block pressure drop values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	Temperature of scrubbing liquid entering column [§§ 63.124(b)(4)(iv) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the temperature of scrubbing liquid entering column averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block temperature of scrubbing liquid entering column for each operating day. 4. Report all 1-hour block values of the temperature of scrubbing liquid entering column that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	Liquid feed pressure [§§ 63.124(b)(4)(v) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the liquid feed pressure of the scrubber averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block liquid feed pressure of the scrubber for each operating day. 4. Report all 1-hour block liquid feed pressure values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
Absorber, Condenser, and Carbon Adsorber (as an alternative to the above).	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	1. Continuous records as specified in § 63.1429. ^b 2. Record and report the average concentration level or reading measured during the performance test—NCS. 3. Record the daily average concentration level or reading as specified in § 63.1429. 4. Report all daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit and all instances when monitoring data are not collected—PR. ^{d,e}
All Combustion, recovery, or recapture devices.	Diversion to the atmosphere from the combustion, recovery, or recapture device or.	1. Hourly records of whether the flow indicator was operating during batch emission episodes selected for control and whether a diversion was detected at any time during the hour, as specified in § 63.1429. 2. Record and report the times of all periods during batch emission episodes selected for control when emissions are diverted through a bypass line, or the flow indicator is not operating—PR. ^d 3. Beginning no later than the compliance dates specified in § 63.1422(h), record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume, and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR. ^d

TABLE 5 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
	Monthly inspections of sealed valves	1. Records that monthly inspections were performed as specified in § 63.1429. 2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR. ^d 3. For each affected source as described in § 63.1420(a), beginning no later than the compliance dates specified in § 63.1422(h), record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume, and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR. ^d
ECO	Time from the end of the epoxide feed, or the epoxide partial pressure in the reactor or direct measurement of epoxide concentration in the reactor liquid at the end of the ECO.	1. Records at the end of each batch, as specified in § 63.1427(i). 2. Record and report the average parameter value of the parameters chosen, measured during the performance test. 3. Record the batch cycle ECO duration, epoxide partial pressure, or epoxide concentration in the liquid at the end of the ECO. 4. Report all batch cycle parameter values outside of the ranges established in accordance with § 63.1427(i)(3), all batch cycles as described in § 63.1427(k)(3)(ii), and all instances when monitoring data were not collected—PR. ^{d,e}

^a Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

^b “Continuous records” is defined in § 63.101.

^c NCS = Notification of Compliance Status described in § 63.1429.

^d PR = Periodic Reports described in § 63.1429.

^e The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1439.

^f Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 6 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM CONTINUOUS UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator, other than a thermal oxidizer used to comply with § 63.1425(g).	Firebox temperature ^a	1. Continuous records as specified in § 63.1429. ^b 2. Record and report the average firebox temperature measured during the performance test—NCS. ^c 3. Record the daily average firebox temperature for each operating day. 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when sufficient monitoring data are not collected—PR. ^{d,e}
Thermal oxidizer used to comply with § 63.1425(g).	Combustion chamber temperature [§§ 63.124(b)(5)(i) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the combustion chamber temperature averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block average firebox temperature for each operating day. 4. Report all 1-hour block temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	Flue gas flow rate [§§ 63.124(b)(5)(ii) and 63.1426(g)].	1. Continuous records. ^b 2. Record and report the flue gas flow rate averaged over the full period of the performance test—NCS. ^c 3. Record each 1-hour block average flue gas flow rate for each operating day. 4. Report all 1-hour block flue gas flow rates that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1429. ^b 2. Record and report the average upstream and downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test—NCS. ^c 3. Record the daily average upstream temperature and temperature difference across catalyst bed for each operating day. 4. Report all daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR. ^{d,e} 5. Report all daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR. ^{d,e} 6. Report all operating days when insufficient monitoring data are collected. ^e
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the process vents are not introduced with or used as the primary fuel.	Firebox temperature ^a	1. Continuous records as specified in § 63.1429. ^b 2. Record and report the average firebox temperature measured during the performance test—NCS. ^c 3. Record the daily average firebox temperature for each operating day. ^d 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when insufficient monitoring data are collected—PR. ^{d,e}
Flare (if meeting the requirements of § 63.1426(a)(1)).	Presence of a flame at the pilot light	1. Hourly records of whether the monitor was continuously operating and whether a flame was continuously present at the pilot light during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS. ^c 3. Record the times and durations of all periods when all flames at the pilot light of a flare are absent or the monitor is not operating. 4. Report the times and durations of all periods when all flames at the pilot light of a flare are absent—PR. ^d

TABLE 6 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM CONTINUOUS UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Flare (if meeting the requirements of § 63.1426(a)(2)).	The parameters are specified in §§ 63.108 and 63.1436.	1. Records as specified in §§ 63.108(m) and 63.1436.
Absorber ^f	Exit temperature of the absorbing liquid, and,	2. Report information as specified in §§ 63.108(l) and 63.1436—PR. ^d
		1. Continuous records as specified in § 63.1429. ^b
		2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the TRE determination—NCS. ^c
		3. Record the daily average exit temperature of the absorbing liquid for each operating day.
		4. Report all the daily average exit temperatures of the absorbing liquid that are below the minimum operating value established in the NCS or operating permit—PR. ^{d,e}
	Exit specific gravity for the absorbing liquid	1. Continuous records as specified in § 63.1429. ^b
		2. Record and report the exit specific gravity averaged over the full period of the TRE determination—NCS.
		3. Record the daily average exit specific gravity for each operating day.
		4. Report all daily average exit specific gravity values that are below the minimum operating value established in the NCS or operating permit—PR. ^{d,e}
Condenser ^f	Exit (product side) temperature	1. Continuous records as specified in § 63.1429. ^b
		2. Record and report the exit temperature averaged over the full period of the TRE determination—NCS.
		3. Record the daily average exit temperature for each operating day.
		4. Report all daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating permit—PR. ^{d,e}
Carbon Adsorber ^f	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s), and	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle.
		2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the period of the TRE determination—NCS. ^c
		3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is above the maximum flow rate established in the NCS or operating permit—PR. ^{d,e}
	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s).
		2. Record and report the temperature of the carbon bed after each regeneration during the period of the TRE determination—NCS. ^c
		3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration is above the maximum temperature established in the NCS or operating permit—PR. ^{d,e}
	Outlet HAP or TOC concentration	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator must record each outlet HAP or TOC concentration measured according to § 63.1429(a)(9)(i) and (ii).
	Adsorbent replacement	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator must record date and time the adsorbent was last replaced.
	Breakthrough	Beginning no later than the compliance dates specified in § 63.1422(h), for each non-regenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.1429(a)(9), the owner or operator must:
		1. Record breakthrough limit and bed life established according to § 63.1429(a)(9)(i).
		2. Report the date of each instance when breakthrough, as defined in § 63.101, is detected between the first and second adsorber and the adsorber is not replaced according to § 63.1429(a)(9)(iii)(A)—PR. ^g
Scrubber with a reactant tank used to comply with § 63.1425(g).	Liquid-to-gas ratio [§§ 63.124(b)(4)(i) and 63.1426(g)].	1. Continuous records. ^b
		2. Record and report the L/G of the scrubber averaged over the full period of the performance test—NCS. ^c
		3. Record each 1-hour block L/G of the scrubber for each operating day.
		4. Report all 1-hour block L/G values of the scrubber that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	In lieu of liquid-to-gas ratio, scrubber total liquid flow rate and gas flow rate through scrubber [§§ 63.124(b)(4)(i) and 63.1426(g)].	1. Continuous records. ^b
		2. Record and report both the total scrubber liquid flow rate and gas flow rate through the scrubber averaged over the full period of the performance test—NCS. ^c
		3. Record each 1-hour block total scrubber liquid flow rate and each 1-hour block gas flow rate through the scrubber for each operating day.
		4. Report all 1-hour block total scrubber liquid flow rate values and all 1-hour block gas flow rate through the scrubber values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}
	pH of liquid in reactant tank [§§ 63.124(b)(4)(ii) and 63.1426(g)].	1. Continuous records. ^b
		2. Record and report the pH of liquid in reactant tank averaged over the full period of the performance test—NCS. ^c
		3. Record each 1-hour block pH of liquid in reactant tank for each operating day.
		4. Report all 1-hour block values of the pH of liquid in reactant tank that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR. ^{d,e}

TABLE 6 TO SUBPART PPP OF PART 63—PROCESS VENTS FROM CONTINUOUS UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Absorber, Condenser, and Carbon Adsorber (as an alternative to the above).	Pressure drop [§§ 63.124(b)(4)(iii) and 63.1426(g)].	1. Continuous records.^b 2. Record and report the pressure drop of the scrubber averaged over the full period of the performance test—NCS.^c 3. Record each 1-hour block pressure drop of the scrubber for each operating day. 4. Report all 1-hour block pressure drop values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR.^{d,e}
	Temperature of scrubbing liquid entering column [§§ 63.124(b)(4)(iv) and 63.1426(g)].	1. Continuous records.^b 2. Record and report the temperature of scrubbing liquid entering column averaged over the full period of the performance test—NCS.^c 3. Record each 1-hour block temperature of scrubbing liquid entering column for each operating day. 4. Report all 1-hour block values of the temperature of scrubbing liquid entering column that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR.^{d,e}
	Liquid feed pressure [§§ 63.124(b)(4)(v) and 63.1426(g)].	1. Continuous records.^b 2. Record and report the liquid feed pressure of the scrubber averaged over the full period of the performance test—NCS.^c 3. Record each 1-hour block liquid feed pressure of the scrubber for each operating day. 4. Report all 1-hour block liquid feed pressure values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected—PR.^{d,e}
	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	1. Continuous records as specified in § 63.1429.^b 2. Record and report the concentration level or reading averaged over the full period of the TRE determination—NCS. 3. Record the daily average concentration level or reading for each operating day. 4. Report all daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit—PR.^{d,e}
All Combustion, recovery, or recapture devices.	Diversion to the atmosphere from the combustion, recovery, or recapture device or	1. Hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during each hour, as specified in § 63.1429. 2. Record and report the times of all periods when the vent stream is diverted through a bypass line, or the flow indicator is not operating—PR.^d 3. Beginning no later than the compliance dates specified in § 63.1422(h), record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume, and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.^d
	Monthly inspections of sealed valves	1. Records that monthly inspections were performed as specified in § 63.1429. 2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR.^d 3. Beginning no later than the compliance dates specified in § 63.1422(h), record and report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume, and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours—PR.^d

^a Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

^b "Continuous records" is defined in § 63.101.

^c NCS = Notification of Compliance Status described in § 63.1429.

^d PR = Periodic Reports described in § 63.1429.

^e The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1439.

^f Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

■ 26. Revise the heading of table 7 to subpart PPP of part 63 to read as follows:

TABLE 7 TO SUBPART PPP OF PART 63—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR PROCESS VENT STREAMS SUBJECT TO § 63.1429(d)(1)

* * * * *

■ 27. Amend table 8 to subpart PPP of part 63 by removing the entry

"§ 63.1439(e)(6)(iii)" and adding the entry "§ 63.1439(e)(6)(viii)" in its place to read as follows:

TABLE 8 TO SUBPART PPP OF PART 63—ROUTINE REPORTS REQUIRED BY THIS SUBPART

Reference	Description of report	Due date
* * * * *		
§ 63.1439(e)(6)(viii)	Quarterly reports for sources with excursions (upon request of the Administrator).	No later than 60 days after the end of each quarter.
* * * * *		