ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 60 and 63

[EPA–HQ–OAR–2010–0682; FRL–9986–68–OAR]

RIN 2060–AT50

National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards: Petroleum Refinery Sector Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes amendments to the petroleum refinery National Emission Standards for Hazardous Air Pollutants (NESHAP) (referred to as Refinery MACT 1 and Refinery MACT 2) and to the New Source Performance Standards (NSPS) for Petroleum Refineries to clarify the requirements of these rules and to make technical corrections and minor revisions to requirements for work practice standards, recordkeeping, and reporting which were proposed in the **Federal Register** on April 10, 2018. This action also finalizes amendments to the compliance date of the requirements for existing maintenance vents from August 1, 2017, to December 26, 2018, which were proposed in the **Federal Register** on July 10, 2018.

DATES: This final rule is effective on November 26, 2018. The incorporation by reference of certain publications listed in the rule was approved by the Director of the Federal Register as of June 24, 2008.

ADDRESSES: The Environmental Protection Agency (EPA) has established a docket for this action under Docket ID No. EPA–HQ–OAR–2010–0682. 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, EPA 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 (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Docket Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Ms. Brenda Shine, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–3608; fax number: (919) 541–0516; and email address: *shine.brenda@epa.gov.* For information about the applicability of the NESHAP to a particular entity, contact Ms. Maria Malave, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, EPA WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: (202) 564–7027; and email address: *malave.maria@epa.gov.*

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. 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.

AFPM American Fuel and Petrochemical Manufacturers
API American Petroleum Institute
AWP Alternative Work Practice
CAA Clean Air Act
CBI confidential business information
CFR Code of Federal Regulations
CEDRI Compliance and Emissions Data Reporting Interface
CDX Central Data Exchange
CRA Congressional Review Act
CRU catalytic reforming unit
DCU delayed coking unit
EPA Environmental Protection Agency
FCCU fluid catalytic cracking unit
FR Federal Register
HAP hazardous air pollutant(s)
lbs pounds
LEL lower explosive limit
MACT maximum achievable control technology
MPV miscellaneous process vent
NAAQS National Ambient Air Quality Standards
NESHAP National Emission Standards for Hazardous Air Pollutants
NOCS Notice of Compliance Status
NSPS New Source Performance Standard
NTTAA National Technology Transfer and Advancement Act
OEL open-ended line
OSHA Occupational Safety and Health Administration
PM particulate matter
ppb parts per billion
ppm parts per million
PRA Paperwork Reduction Act
PRD pressure relief device
psi pounds per square inch
psia pounds per square inch absolute
RFA Regulatory Flexibility Act
RIN Regulatory Information Number
RSR Refinery Sector Rule
SMR steam-methane reforming
TTN Technology Transfer Network
UMRA Unfunded Mandates Reform Act
VOC volatile organic compounds

Background information. On April 10, 2018, and July 10, 2018, the EPA proposed revisions to the Petroleum Refineries NESHAP and NSPS, (April 2018 Proposal and July 2018 Proposal), respectively (83 FR 15458, April 10, 2018; 83 FR 31939, July 10, 2018). After consideration of the public comments we received on these proposed rules, in this action, we are finalizing revisions to the NESHAP and NSPS rules. We summarize the significant comments we received regarding the April 2018 Proposal and the July 2018 Proposal and provide our responses in this preamble. In addition, a Response to Comments document, which is in the docket for this rulemaking, summarizes and responds to additional comments which were received regarding the April 2018 Proposal. A ''track changes'' version of the regulatory language that incorporates the changes in this action is also available in the docket.

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

I. General Information

A. Does this action apply to me?

Regulated entities. Categories and entities potentially regulated by this action are shown in Table 1 of this preamble.

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

NESHAP and source category	NAICS [1] code
40 CFR part 63, subpart CC Petroleum Refineries	324110

[1] North American Industry Classification System.

Table 1 of this preamble is not intended to be exhaustive, but rather to provide 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.

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 final action will also 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/petroleum-refinery-sector-risk-and-technology-review-and-new-source.* Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (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 January 25, 2019. 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.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which 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, EPA 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

On December 1, 2015, the EPA finalized amendments to the Petroleum Refinery NESHAP in 40 Code of Federal Regulations (CFR) part 63, subparts CC and UUU, referred to as Refinery MACT 1 and 2, respectively, and the NSPS for petroleum refineries in 40 CFR part 60, subparts J and Ja (80 FR 75178) (December 2015 Rule). The final amendments to Refinery MACT 1 include a number of new requirements for ''maintenance vents,'' pressure relief devices (PRDs), delayed coking units (DCUs), and flares, and also establishes a fenceline monitoring requirement.

The December 2015 Rule included revisions to the continuous compliance alternatives for catalytic cracking units and provisions specific to startup and shutdown of catalytic cracking units and sulfur recovery plants. The December 2015 Rule also finalized technical corrections and clarifications to Refinery NSPS subparts J and Ja to address issues raised by the American Petroleum Institute (API) in their 2008 and 2012 petitions for reconsideration of the final NSPS Ja rule that had not been previously addressed. These include corrections and clarifications to provisions for sulfur recovery plants, performance testing, and control device operating parameters.

In the process of implementing these new requirements, numerous questions and issues have been identified and we proposed clarifications and technical amendments to address these questions and issues on April 10, 2018 (April 2018 Proposal) (83 FR 15458; April 10, 2018). These issues were raised in petitions for reconsideration and in separately issued letters from industry and in meetings with industry groups.

The EPA received three separate petitions for reconsideration. Two petitions were jointly filed by API and American Fuel and Petrochemical Manufacturers (AFPM). The first of these petitions was filed on January 19, 2016 and requested an administrative reconsideration under section 307(d)(7)(B) of the CAA of certain provisions of Refinery MACT 1 and 2, as promulgated in the December 2015 Rule. Specifically, API and AFPM requested that the EPA reconsider the maintenance vent provisions in Refinery MACT 1; the alternate startup, shutdown, or hot standby standards for fluid catalytic cracking units (FCCUs) in Refinery MACT 2; the alternate startup and shutdown for sulfur recovery units in Refinery MACT 2; and the new catalytic reforming units (CRUs) purging limitations in Refinery MACT 2. The request pertained to providing and/or clarifying the compliance time for these requirements. Based on this request and additional information received, the EPA issued a proposal on February 9, 2016 (81 FR 6814), and a final rule on July 13, 2016 (81 FR 45232), fully responding to the January 19, 2016, petition for reconsideration. The second petition from API and AFPM was filed on February 1, 2016 and outlined a number of specific issues related to the work practice standards for PRDs and flares, and the alternative water overflow provisions for DCUs, as well as a number of other specific issues on other aspects of the rule. The third petition was filed on February 1, 2016, by Earthjustice on behalf of Air Alliance Houston, California Communities Against Toxics, the Clean Air Council, the Coalition for a Safe Environment, the Community In-Power and Development Association, the Del Amo Action Committee, the Environmental Integrity Project, the Louisiana Bucket Brigade, the Sierra Club, the Texas Environmental Justice Advocacy Services, and Utah Physicians for a Healthy Environment. The Earthjustice petition claimed that several aspects of the revisions to Refinery MACT 1 were

not addressed in the proposed rule, and, thus, the public was precluded from commenting on them during the public comment period, including: (1) Work practice standards for PRDs and flares; (2) alternative water overflow provisions for DCUs; (3) reduced monitoring provisions for fenceline monitoring; and (4) adjustments to the risk assessment to account for these changes from what was proposed. On June 16, 2016, the EPA sent letters to petitioners granting reconsideration on issues where petitioners claimed they had not been provided an opportunity to comment. These petitions and letters granting reconsideration are available for review in the rulemaking docket (see Docket ID Nos. EPA–HQ–OAR–2010–0682–0860, EPA–HQ–OAR–2010–0682–0891 and EPA–HQ–OAR–2010–0682–0892).

On October 18, 2016 (81 FR 71661), the EPA proposed for public comment the issues for which reconsideration was granted in the June 16, 2016, letters. The EPA identified five issues for which it was seeking public comment: (1) The work practice standards for PRDs; (2) the work practice standards for emergency flaring events; (3) the assessment of risk as modified based on implementation of these PRD and emergency flaring work practice standards; (4) the alternative work practice (AWP) standards for DCUs employing the water overflow design; and (5) the provision allowing refineries to reduce the frequency of fenceline monitoring at sampling locations that consistently record benzene concentrations below 0.9 micrograms per cubic meter. In that notice, the EPA also proposed two minor clarifying amendments to correct a cross referencing error and to clarify that facilities complying with overlapping equipment leak provisions must still comply with the PRD work practice standards in the December 2015 Rule.

The February 1, 2016, API and AFPM petition for reconsideration included a number of recommendations for technical amendments and clarifications that were not specifically addressed in the October 18, 2016, proposal.[1] In addition, API and AFPM asked for clarification on various requirements of the final amendments in a July 12, 2016, letter.[2] The EPA addressed many of the clarification requests from the July 2016 letter and the petition for reconsideration in a letter issued on April 7, 2017.[3] API and AFPM also raised additional issues associated with the implementation of the final rule amendments in a March 28, 2017, letter to the EPA[4] and provided a list of typographical errors in the rule in a January 27, 2017, meeting[5] with the EPA. On January 10, 2018, AFPM submitted a letter containing a comparison of the electronic CFR, the **Federal Register** documents, and the redline versions of the December 2015 Rule and October 2016 amendments to the Refinery Sector Rule noting differences and providing suggestions as to how these discrepancies should be resolved.[6] These items are located in Docket ID No. EPA–HQ–OAR–2016–0682. On April 10, 2018 (83 FR 15848), the EPA published proposed additional revisions to the December 2015 Rule addressing many of the issues and clarifications identified by API and AFPM in their February 2016 petition for reconsideration and their subsequent communications with the EPA.

On July 10, 2018, the EPA published a proposed rule (July 2018 Proposal) to revise the compliance date for maintenance vents located at sources constructed on or before June 30, 2014, from August 1, 2017, to January 30, 2019, (83 FR 31939; July 10, 2018). We proposed to change the compliance date to address challenges petroleum refinery owners or operators are experiencing in attempting to comply with the December 2015 Rule maintenance vent requirements, notwithstanding the additional compliance time provided by our revision of the compliance date to August 1, 2017, plus an additional 1-year (*i.e.,* August 1, 2018) compliance extension granted by the relevant permitting authorities for each source pursuant to the requirements set forth in the General Provisions at 40 CFR 63.6(i). The requirements for maintenance vents promulgated in the December 2015 Rule resulted in the need for completing the ''management of change process'' for affected sources (81 FR 45232, 45237, July 13, 2016). We also recognized that the Agency had proposed technical revisions and clarifications to the maintenance vent provisions in the April 2018 Proposal and that an extension would also allow the EPA to take final action on that proposal prior to the extended compliance date. Technical revisions and clarifications are being finalized in today's rule.

The April 2018 Proposal provided a 45-day comment period ending on May 25, 2018. The EPA received 16 comments on the proposed amendments from refiners, equipment manufacturers, trade associations, environmental groups, and private citizens. The July 2018 Proposal provided a 30-day comment period ending on August 9, 2018. The EPA received comments on the proposed revisions from refiners, trade associations, environmental groups, and private citizens. This preamble to the final rule provides a discussion of the final revisions, including changes in response to comments on the proposal, as well as a summary of the significant comments received and responses.

III. What is included in this final rule?

A. Clarifications and Technical Corrections to Refinery MACT 1

1. Definitions

What is the history of the definitions addressed in the April 2018 Proposal?

In the April 2018 Proposal, we proposed to amend four definitions: Flare purge gas, supplemental natural gas, relief valve, and reference control technology for storage vessel and to define an additional term. Specific to flare purge gas, we proposed for the term to include gas needed for other safety reasons. For flare supplemental gas, we proposed to amend the definition to specifically exclude assist air or assist steam. For relief valves we narrowed the definition to include PRDs that are designed to re-close after the pressure relief. As a complementary amendment, we proposed to add a definition for PRD. Finally, we proposed to revise the definition of reference control technology for storage vessels to be consistent with the storage vessel rule requirements in section 63.660.

What key comments were received on definitions?

We did not receive public comments on the proposed addition and revisions of these definitions.

[1] Supplemental Request for Administrative Reconsideration of Targeted Elements of EPA's Final Rule ''Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards; Final Rule,'' Howard Feldman, API, and David Friedman, AFPM. February 1, 2016. Docket ID No. EPA–HQ–OAR–2010–0682–0892.

[2] Letter from Matt Todd, API, and David Friedman, AFPM, to Penny Lassiter, EPA. July 12, 2016. Available in Docket ID No. EPA–HQ–OAR–2010–0682.

[3] Letter from Peter Tsirigotis, EPA, to Matt Todd, API, and David Friedman, AFPM. April 7, 2017. Available at: *https://www.epa.gov/stationarysources-air-pollution/december-2015-refinerysector-rule-response-letters-qa.*

[4] Letter from Matt Todd, API, and David Friedman, AFPM, to Penny Lassiter, EPA. March 28, 2017. Available in Docket ID No. EPA–HQ–OAR–2010–0682.

[5] Meeting minutes for January 27, 2017, EPA meeting with API. Available in Docket ID No. EPA–HQ–OAR–2010–0682.

[6] David Friedman, ''Comparison of Official CFR and e-CFR Postings Regarding MACT CC/UUU and NSPS Ja Postings.'' Message to Penny Lassiter and Brenda Shine. January 10, 2018. Email.

What is the EPA's final decision on the definitions?

We are finalizing the addition and revisions of these definitions as proposed.

2. Miscellaneous Process Vent Provisions

In the April 2018 Proposal, we proposed several amendments to address petitioners' requests for revisions and clarifications to the requirements identifying and managing the subset of miscellaneous process vents (MPV) that result from maintenance activities. In the July 2018 Proposal, we proposed to change the compliance date of the requirements for existing maintenance vents. We describe each of these proposals in the following subparagraphs.

a. Notice of Compliance Status (NOCS) Report

What is the history of the NOCS report for MPV addressed in the April 2018 Proposal?

In their March 28, 2017, letter (Docket ID No. EPA–HQ–OAR–2010–0682–0915), API and AFPM noted that the MPV provisions at section 63.643(c) do not require an owner or operator to designate a maintenance vent as Group 1 or Group 2 MPV. However, they stated that the reporting requirements at section 63.655(f)(1)(ii) are unclear as to whether a NOCS report is needed for some or all maintenance vents. We did not intend for maintenance vents to be included in the NOCS report. The rule has separate requirements for characterizing, recording, and reporting maintenance vents in section 63.655(g)(13) and (h)(12); therefore, it is not necessary to identify each place where equipment may be opened for maintenance in a NOCS report. To clarify this, we proposed to add language to section 63.643(c) to explicitly state that maintenance vents need not be identified in the NOCS report.

What key comments were received on the NOCS report for MPV provisions?

We did not receive comments on the proposed amendment in section 63.643(c) to explicitly state that maintenance vents need not be identified in the NOCS report.

What is the EPA's final decision on the NOCS report for MPV provisions?

We are finalizing the amendment in section 63.643(c) as proposed.

b. Maintenance Vents Associated With Equipment Containing Pyrophoric Catalysts

What is the history of regulatory text for maintenance vents associated with equipment containing pyrophoric catalyst addressed in the April 2018 Proposal?

Under 40 CFR 63.643(c) an owner or operator may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. Facilities generally must comply with one of three conditions prior to venting maintenance vents to the atmosphere (section 63.643(c)(1)(i)–(iii)). However, section 63.643(c)(1)(iv) of the December 2015 Rule provides flexibility for maintenance vents associated with equipment containing pyrophoric catalyst (or simply "pyrophoric units"), such as hydrotreaters and hydrocrackers, at refineries that do not have pure hydrogen supply. At many refineries, pure hydrogen is generated by steam-methane reforming (SMR), with hydrogen concentrations of 98 volume percent or higher. The other source of hydrogen available at refineries is from the CRU. This catalytic reformer hydrogen may have hydrogen concentrations of 50 percent or more and may contain appreciable concentrations of light hydrocarbons which limit the ability of vents associated with this source of hydrogen to meet the lower explosive limit (LEL) of 10 percent or less. The December 2015 Rule limits the flexibility to maintenance vents associated with pyrophoric units at refineries without a pure hydrogen supply. For pyrophoric units at a refinery without a pure hydrogen supply, the December 2015 Rule provides that the LEL of the vapor in the equipment must be less than 20 percent, except for one event per year not to exceed 35 percent.

API and AFPM took issue with the regulatory language that drew a distinction based on whether there is a pure hydrogen supply located at the refinery. As described in the preamble to the April 2018 Proposal (83 FR 15462), we reviewed comments from API and AFPM as well as additional information contained in an August 1, 2017, letter (Docket ID No. EPA–HQ–OAR–2010–0682–0916) which provided evidence that a single refinery may have many pyrophoric units, some that have a pure hydrogen supply and some that do not have a pure hydrogen supply. Thus, our assumption at the time we issued the December 2015 Rule that all pyrophoric units at a single refinery either would or would not have a pure hydrogen supply was incorrect. Therefore, we proposed to modify the portion of the regulatory text that distinguished units based on whether there was a pure hydrogen supply "at the refinery" and instead base the regulation on whether a pure hydrogen supply was available for the pyrophoric unit.

What key comments were received on the regulatory text for maintenance vents associated with equipment containing pyrophoric catalyst?

Comment b.1: One commenter (–0953) stated that the proposed language is inadequately defined, and allows the refiner to opt in to the provision providing flexibility by, for example, shutting down the source of the pure hydrogen supply.

Response b.1: In most cases, the pyrophoric unit will be supplied by either pure SMR hydrogen or catalytic reforming hydrogen. As purging with hydrogen is one of the steps used to de-inventory this equipment, the refiner cannot shutdown the hydrogen supply prior to de-inventorying the equipment. If a pyrophoric unit can be supplied with either SMR and catalytic reformer hydrogen, and the SMR hydrogen is being used during normal operations of the pyrophoric unit prior to de-inventorying the unit, we consider it a violation of the good air pollution control practices requirement in section 63.643(n) to switch the hydrogen supply only for de-inventorying the equipment. We also note that the refiner must keep records of the lack of a pure hydrogen supply as required at section 63.655(i)(12)(v).

Comment b.2: One commenter stated that the EPA has not provided any assessment of the potential increase of uncontrolled emissions to the atmosphere, or an analysis of the increase in health risks or the environmental impact of the proposed exemption, or an assessment of the industry-provided cost data.

Response b.2: The docket for the rulemaking includes the information upon which we based our decisions, including costs and environmental impact estimates of the provision providing flexibility to maintenance vents associated with pyrophoric units without a pure hydrogen supply. We had reviewed this information and determined that it was a reasonable estimate of the impacts (see Docket ID Nos. EPA–HQ–OAR–2010–0682–0733 and –0909). This information supports our statement in the April 2018

Proposal that this amendment is not projected to appreciably impact emission reductions associated with the standard. In fact, considering secondary emissions from the flare or other control system needed to comply with the 10 percent LEL limit, this provision providing flexibility to maintenance vents associated with pyrophoric units without a pure hydrogen supply is expected to result in a net environmental benefit.

Comment b.3: One commenter stated that the exemption does not comport with the requirements of CAA section 112(d)(2)–(3), which requires the standards to be no less stringent than the maximum achievable control technology (MACT) floor. The commenter points to the voluntary survey of hydrogen production units as submitted by API and notes that 12 of 62 units not connected to a pure hydrogen supply reported being able to comply with the 10 percent LEL standard. As such, the commenter contends that the MACT floor should be 10 percent LEL for equipment containing pyrophoric catalysts regardless of whether or not they are connected to a pure hydrogen supply and, thus, there should be no alternative based on whether or not a pure hydrogen supply is available. Furthermore, the commenter stated that costs cannot be used as justification for providing a higher emission limit alternative to MACT standards, particularly those based on the MACT floor.

Response b.3: As an initial matter, the EPA did not intend to re-open the issue of what is the MACT floor for pyrophoric units through the proposal. Rather, the issue raised was whether the flexibility provided should only be for pyrophoric units located at a refinery without a pure hydrogen supply or should also apply to pyrophoric units located at a facility that has a pure hydrogen supply but for which pure hydrogen is not available at the unit. Regardless, we disagree with the commenter that the survey results submitted by API support a conclusion that 10 percent LEL is the MACT floor for all pyrophoric units. The survey provided by API was not the type of rigorous survey that could provide a basis for establishing the MACT floor. As an initial matter, the API survey did not include the universe of pyrophoric units and there is no information to suggest whether the best performers for the subset of units addressed in the survey represents the top performing 12 percent of sources across the industry. Also, because the exact questions and definitions of terms were not provided, there may be some misinterpretation of the results. For example, it is unclear from the summary provided if the question was whether the facility owners or operators could meet 10 percent LEL for all events (*i.e.,* a never-to-be-exceeded limit) or if this was more of an operational average.

We agree with the commenter that costs cannot be considered in establishing a MACT standard. We based this provision on an assessment of the overall environmental impacts associated with the emission limitations and concluded that the best performing pyrophoric units without a pure hydrogen supply, when considering secondary impacts, was to meet a 20 percent LEL with one exception not to exceed 35 percent LEL per year. The API survey does not provide support to change our analysis of the MACT floor in the December 2015 Rule.

Comment b.4: One commenter (–0958) pointed out that the proposed amendment to section 63.643(c)(1)(iv) is inconsistent with the description of the amendment included in the preamble to the April 2018 Proposal. Specifically, the description of the amendment in the preamble of the April 2018 Proposal does not contain the additional phrase, ''considering all such maintenance vents at the refinery,'' which was included in the amendatory text. The commenter suggested that the EPA delete this phrase as it could be interpreted to limit the use of the 35 percent allowance to once per year per refinery rather than to once per year per piece of equipment.

Response b.4: We agree that the preamble discussion and the rule language regarding these revisions are not consistent. We did not intend to limit the one time per year 35 percent LEL to the refinery; rather, we intended it to apply to each pyrophoric unit without a pure hydrogen supply. Consistent with our intent as expressed in the preamble discussion of the April 2018 Proposal, 83 FR at 15462, we are removing the phrase, ''considering all such maintenance vents at the refinery'' from the regulatory text at section 63.643(c)(1)(iv) for the final amendments promulgated by this rulemaking.

What is the EPA's final decision on the regulatory text for maintenance vents associated with equipment containing pyrophoric catalyst?

We are finalizing the proposed amendment with one change. In response to the public comments received, we are not including the phrase ''considering all such maintenance vents at the refinery'' in the final regulatory text at section 63.643(c)(1)(iv), as revised by this rulemaking.

c. Control Requirements for Maintenance Vents

What is the history of the provisions for the control requirements for maintenance vents addressed in the April 2018 Proposal?

Paragraph 63.643(a) specifies that Group 1 miscellaneous process vents must be controlled by 98 percent or to 20 parts per million by volume or to a flare meeting the requirements in section 63.670. This paragraph also states in the second sentence that requirements for maintenance vents are specified in section 63.643(c), ''and the owner or operator is only required to comply with the requirements in section 63.643(c).'' Paragraphs (c)(1) through (3) then specify requirements for maintenance vents. Paragraph (c)(1) requires that equipment must be depressured to a control device, fuel gas system, or back to the process until one of the conditions in paragraph (c)(1)(i) through (iv) is met. In reviewing these rule requirements, the EPA noted that we did not specify that the control device in (c)(1) must also meet the Group 1 miscellaneous process vent control device requirements in paragraph (a). The second sentence in section 63.643(a) could be misinterpreted to mean that a facility complying with the maintenance vent provisions in section 63.643(c) must only comply with the requirements in paragraph (c) and not the control requirements in paragraph (a) for the control device referenced by paragraph (c)(1). In omitting these requirements, we did not intend that the control requirement for maintenance vents prior to atmospheric release would not be compliant with Group 1 controls as specified in section 63.643(a). In order to clarify this intent, we proposed to amend paragraph section 63.643(c)(1) to include control device specifications equivalent to those in section 63.643(a).

What key comments were received on the provisions for the control requirements for maintenance vents?

We received one comment in support of this revision.

What is the EPA's final decision on the provisions for the control requirements for maintenance vents?

We are finalizing the amendment to § 63.643(c)(1) to include control device specifications equivalent to those in § 63.643(a), as proposed.

d. Additional Maintenance Vent Alternative for Equipment Blinding

What is the history of the maintenance vent alternative for equipment blinding addressed in the April 2018 Proposal?

We proposed a new alternative compliance option for the subset of maintenance vents subject to the provisions addressed at § 63.643(c)(v). The proposed alternative compliance option would apply to equipment that must be blinded to seal off hydrocarbon-containing streams prior to conducting maintenance activities.

What key comments were received on the maintenance vent alternative for equipment blinding?

We received two comments on the proposed amendment. One commenter expressed concern regarding the burden of the recordkeeping associated with this alternative compliance option. The second commenter asserted that the use of work practice standards for maintenance vents is illegal. As detailed in the comment summaries and responses included in the response to comment document for this final rule (Docket ID No. EPA–HQ–OAR–2010–0682), we were not persuaded to make changes to the proposed amendments.

What is the EPA's final decision on the maintenance vent alternative for equipment blinding?

We are finalizing the new alternative compliance option for the subset of maintenance vents subject to the requirements of § 63.643(c)(v) for which equipment blinding is necessary, as proposed.

e. Recordkeeping for Maintenance Vents on Equipment Containing Less Than 72 Pounds per Day (lbs/day) of Volatile Organic Compounds (VOC)

What is the history of the provisions regarding recordkeeping for maintenance vents on equipment containing less than 72 lbs/day of VOC provisions addressed in the April 2018 Proposal?

Under section 63.643(c) an owner or operator may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. The rule specifies that prior to venting a maintenance vent to the atmosphere, process liquids must be removed from the equipment as much as practical and the equipment must be depressured to a control device, fuel gas system, or back to the process until one of several conditions, as applicable, is met. One condition specifies that equipment containing less than 72 lbs/day of VOC can be depressured directly to the atmosphere provided that the mass of VOC in the equipment is determined and provided that refiners keep records of the process units or equipment associated with the maintenance vent and the date of each maintenance vent opening, and the estimate of the total quantity of VOC in the equipment at the time of vent opening. Therefore, each maintenance vent opening would be documented on an event-basis.

Industry petitioners noted that there are numerous routine maintenance activities, such as replacing sampling line tubing or replacing a pressure gauge, that involve potential releases of very small amounts of VOC, often less than 1 lb/day, that are well below the 72 lbs/day of VOC threshold provided in section 63.643(c)(1)(iii). They claimed that documenting each individual event is burdensome and unnecessary. As stated in the preamble to the April 2018 Proposal (83 FR 15463), the EPA agrees that documentation of each release from maintenance vents which serve equipment containing less than 72 lbs/day of VOC is not necessary provided there is a demonstration that the event is compliant with the requirement that the equipment contains less than 72 lbs/day of VOC. Therefore, we proposed to revise the event-specific recordkeeping requirements specific to maintenance vent openings in equipment containing less than 72 lbs/day of VOC to only require a record demonstrating that the total quantity of VOC in the equipment based on the type, size, and contents is less than 72 lbs/day of VOC at the time of the maintenance vent opening.

What key comments were received on the recordkeeping for maintenance vents on equipment containing less than 72 lbs/day of VOC provisions?

We received two comments on this proposed amendment. One commenter maintained that the event-specific recordkeeping requirements are too burdensome, while the other commenter maintained that the recordkeeping requirements are not adequate to assure compliance with the rule. As detailed in the comment summaries and responses included in the response to comment document for this final rule (Docket ID No. EPA–HQ–OAR–2010–0682), we concluded that the proposed amendment struck the right balance between requiring the necessary information needed to demonstrate and enforce compliance with the 72 lbs/day of VOC maintenance vent provision while reducing the recordkeeping and reporting burden with more detailed records.

What is the EPA's final decision on the recordkeeping for maintenance vents on equipment containing less than 72 lbs/day of VOC provisions?

We are finalizing these amendments as proposed.

f. Bypass Monitoring for Open-Ended Lines (OEL)

What is the history of the bypass monitoring provisions for OELs addressed in the April 2018 Proposal?

API and AFPM requested clarification of the bypass monitoring provisions in section 63.644(c) for OEL (Docket ID Nos. EPA–HQ–OAR–2010–0682–0892 and –0915). This provision excludes components subject to the Refinery MACT 1 equipment leak provisions in section 63.648 from the bypass monitoring requirement. Noting that the provisions in section 63.648 only apply to components in organic hazardous air pollutants (HAP) service (*i.e.*, greater than 5-weight percent HAP), API and AFPM asked whether the EPA also intended to exclude open-ended valves or lines that are in VOC service (less than 5-weight percent HAP) and are capped and plugged in compliance with the standards in NSPS subpart VV or VVa or the Hazardous Organic NESHAP (HON; 40 CFR part 63, subpart H) that are substantively equivalent to the Refinery MACT 1 equipment leak provisions in section 63.648. Commenters noted that OELs in conveyances carrying a Group 1 MPV could be in less than 5-weight percent HAP service, but could still be capped and plugged in accordance with another rule, such as NSPS subpart VV or VVa or the HON. As stated in the preamble to the proposed rule (83 FR 15464), the EPA agrees that, because the use of a cap, blind flange, plug, or second valve for an open-ended valve or line is sufficient to prevent a bypass, the Refinery MACT 1 bypass monitoring requirements in section 63.644(c) are redundant with NSPS subpart VV in these cases. Therefore, we proposed to amend section 63.644(c) to make clear that open-ended valves or lines that are capped and plugged sufficient to meet the standards in NSPS subpart VV at § 60.482–6(a)(2), (b), and (c), are not subject to the bypass monitoring in section 63.644(c).

What key comments were received on the bypass monitoring provisions for OELs?

Comment f.1: One commenter (–0958) expressed support for the addition of

the bypass monitoring option for capped or plugged OELs in section 63.644(c)(3). The commenter suggested that the EPA similarly amend section 63.660(i)(2) to provide this new monitoring alternative for vent systems handling Group 1 storage vessel vents. A different commenter (–0953) opposed this revision, stating that the EPA did not show or provide any evidence to support the statement that the monitoring requirements are ''redundant with NSPS subpart VV.'' The commenter recommended that the EPA require a compliance demonstration or otherwise demonstrate that the provisions are equivalent.

Response f.1: The December 2015 Rule bypass provisions require either a flow indicator or the use of a valve locked in a non-diverting position using a car-seal or lock and key. The general equipment leak provisions for OELs are installation of a plug, cap or secondary valve. Based on the effectiveness of this equipment work practice standard, continuous or periodic monitoring of these secondarily-sealed lines are not generally required. With the elimination of the exemption for discharges associated with maintenance activities and process upsets under the definition of ''periodically discharged'' in the December 2015 Rule, there are a number of process lines that are not traditional bypass lines and that were not previously considered an MPV or an MPV bypass, but now are. Many of these lines are small and not conducive to the installation of a car-seal or lock and key so they cannot comply with the current bypass provisions. Most of these small lines have been previously regulated via Refinery MACT 1's requirement to comply with the NSPS open-ended line provisions, which are an effective means to control emissions from these smaller lines. Because the existing equipment leak provisions for these types of OELs serve the same purpose and are more appropriate for these smaller lines, we determined that it is reasonable to provide for this method of compliance for these OELs.

What is the EPA's final decision on the bypass monitoring provisions for OELs?

We are finalizing this amendment as proposed. In response to comments received on the proposed rule, we are providing this new monitoring alternative for vent systems handling Group 1 storage vessel vents at section 63.660(i)(2) in the final rule.

g. Compliance Date Extension for Existing Maintenance Vents

What is the history of the compliance date extension for existing maintenance vents addressed in the July 2018 Proposal?

In the July 2018 Proposal, we proposed to amend the compliance date for maintenance vent provisions applicable to existing sources (*i.e.*, those constructed or reconstructed on or before June 30, 2014) promulgated at 40 CFR 63.643(c). The basis for this proposal was that sources needed additional time to follow the ''management of change'' process. We also noted that we had proposed substantive revisions to the maintenance vent requirements as part of the April 2018 Proposal.

What significant comments were received on the compliance date extension for existing maintenance vents?

Comment g.1: One commenter (–0968) stated that the proposed compliance extension is arbitrary and capricious because the EPA has not provided any evidence as to why refineries could not comply with the August 1, 2017, compliance date and why a revised compliance date of January 30, 2019, is as expeditious as practicable, as required by CAA section 112(i)(3)(A). The commenter noted that the EPA referred to the fact that some number of refinery owners and operators have applied for and received compliance extensions of up to one year from their permitting authorities pursuant to 40 CFR 63.6(i), but does not provide any evidence of these applications or subsequent state agency determinations in the rulemaking record. The commenter further noted that the EPA's failure to provide this information in the record for the rulemaking has inhibited the public's ability to provide fully informed comments, and as such, the EPA is in violation of the notice-and-comment and public participation requirements of CAA section 307(d). The commenter also disagreed with the EPA's statement in the preamble of the July 2018 Proposal that the source requests for an extension from the permitting authorities is demonstrative of refinery owners and operators acting on ''good faith efforts.'' Rather, the commenter asserted that the filing of these requests shows an avoidance of compliance with the rule.

The commenter stated that the proposed compliance extension is particularly harmful since the EPA has acknowledged that there are significant disproportionate impacts of refinery pollution to communities of color and low-income people. The commenter noted that the EPA has not supported the conclusion in the July 2018 Proposal that the extension of compliance would have an insignificant effect on emissions reductions. A separate commenter (–0971) concurred with the EPA's conclusions that the proposed compliance extension would have an insignificant effect on emissions reductions.

The commenter also stated that the EPA's reliance on regulatory uncertainty due to the April 2018 Proposal as part of the justification for the need for a compliance extension is at odds with the CAA's explicit prohibition on any delay or postponement of a final rule based on reconsideration (see CAA section 307(d)(7)(B)). The commenter further added that this provision only allows the EPA to stay a rule's effective date during reconsideration, not to postpone compliance, and only enables the EPA to do so for up to three months. Another commenter (–0971) expressed support for the proposed compliance extension for maintenance vents because of regulatory uncertainty since the EPA proposed amendments in April 2018 Proposal, but has not yet finalized those proposed amendments. The commenter stated that these revisions are critical to providing certainty as to what is required and to assure equipment may be isolated for maintenance under all expected maintenance situations. The commenter noted that maintenance vents are located across the refinery, and time will be needed to review procedures that would implement those revisions under refinery management of change processes, incorporate the changes into refinery compliance procedures and recordkeeping and reporting systems, and provide training to employees.

Response g.1: The EPA is not finalizing the extension of the compliance date as proposed in July 2018. However, in order to provide sources with time to understand the amended maintenance requirements, to determine which maintenance compliance option best meets their needs, and to come into compliance we are modifying the compliance date so that it is 30 days following the effective date of the final rule. Due to the variety of different types of maintenance vents and their ubiquitous nature, there has been some uncertainty as to how the maintenance vent requirements apply; whether the provisions, as promulgated, are appropriate for all types of vents; and the time needed to make the requisite modifications to ensure

compliance. The maintenance vent provisions in their current form were promulgated in the December 2015 Rule in order to replace a start-up, shutdown and malfunction (SSM) provision that was included in the original MACT standard. The EPA was replacing the SSM provisions because in *Sierra Club* v. *EPA,* [551 F.3d 1019 (D.C. Cir. 2008)], the D.C. Circuit determined that SSM provisions, similar to those included in the Refinery MACT were inconsistent with the requirements of the CAA. The EPA originally provided a compliance date as of the effective date of the December 2015 Rule (January 30, 2016), but subsequently extended that date to August 2017 based on information from refineries that they needed more time to comply. As previously noted, many refineries sought a further extension until August 2018 from state permitting authorities. Establishing a compliance date 30 days following promulgation of these revisions will allow refineries a modest amount of time to ensure any remaining maintenance vents not yet in compliance with the MACT, as modified through this final action, are in compliance.

With respect to the comments on the effect of emissions reductions relative to the July 2018 Proposal, we reached this conclusion based on several factors. First, maintenance events typically occur about once per year or less frequently for major equipment. Thus, during the proposed period of the compliance extension (approximately 6 months from the August 2018 compliance date that applied to most refineries due to extensions granted by state permitting authorities), some equipment would have no major events and other equipment, at most, should experience only one event. Second, facilities would still be required to comply with the general requirements to use good air pollution control practices during maintenance events. Many facility owners or operators already have standard procedures for emptying and degassing equipment. While these procedures are not as stringent as the MACT requirements for maintenance vents as adopted in the December 2015 Rule and as we had proposed in April 2018, they would provide some limit on emissions to the atmosphere. In a meeting with industry representatives, an example of the type of emissions occurring from maintenance vents was provided to the Agency (Docket ID No. EPA–HQ–OAR–2010–0682–0909). Based on that example, the Agency estimates that approximately 200 lbs of VOC would be released from purging 6 pieces of equipment containing pyrophoric catalyst when venting at 35 percent LEL rather than 10 percent LEL. Based on our previous analysis of impacts for risk and technology review revisions to Refinery MACT 1, we estimate approximately 10 percent of VOC emissions are HAP, so that we estimate on the order of approximately 3 pounds of HAP emissions ($0.1 \times 200/6$) would occur per major equipment venting event. The maintenance vent provisions as adopted in the December 2015 Rule were projected to reduce emissions of HAP by 5,200 tons per year (80 FR 75178, December 1, 2015). Therefore, based on the low expected emissions from each major equipment venting event, the expected limited occurrence of maintenance venting events, and the likelihood that many types of maintenance venting events are in compliance with the MACT, the compliance extension would have an insignificant effect on emissions.

What is the EPA's final decision on the compliance date extension for existing maintenance vents?

The EPA is not finalizing the compliance extension as proposed in the July 2018 Proposal. However, in order to provide sources with time to understand the amended maintenance requirements, to determine which maintenance compliance option best meets their needs, and to come into compliance, we are modifying the compliance date so that it is 30 days following the effective date of the final rule.[7]

3. Pressure Relief Device Provisions

a. Clarification of Requirements for PRD "in organic HAP service"

What is the history of the requirements for PRD "in organic HAP service" addressed in the April 2018 Proposal?

The introductory text for the equipment leak provisions for PRD in section 63.648(j) requires compliance with no detectable emission provisions for PRD "in organic HAP gas or vapor service" and the pressure release management requirements for PRD "for all pressure relief devices." However, the pressure release management requirements for PRD in section 63.648(j)(3) are applicable only to PRD "in organic HAP service." There are five specific provisions within the pressure release management requirements for PRD listed in paragraphs 63.648(j)(3)(i) through (v). In the first four paragraphs, the phrase "each [or any] affected pressure relief device" is used, but this phrase is missing in the fifth paragraph. API and AFPM requested that we clarify whether releases listed in section 63.648(j)(3)(v) are limited to PRDs "in organic HAP service." Consistent with the requirements in section 63.648(j)(3)(i) through (iv) and the Agency's intent when promulgating the provisions in section 63.648(j)(3), we proposed to add the phrase, "affected pressure relief device" to section 63.648(j)(3)(v). We also proposed to amend the introductory text in paragraph (j) to add the phrase, "in organic HAP service" at the end of the last sentence to further clarify that the pressure release management requirements for PRD in section 63.648(j)(3) are applicable to "all pressure relief devices in organic HAP service."

What key comments were received on the requirements for PRD "in organic HAP service"?

We did not receive any public comments on these proposed amendments.

What is the EPA's final decision on the requirements for PRD "in organic HAP service"?

We are finalizing these amendments as proposed.

b. Redundant Release Prevention Measures in 40 CFR 63.648(j)(3)(ii)

What is the history of the requirements for redundant release prevention measures addressed in the April 2018 Proposal?

Section 63.648(j)(3)(ii) lists options for three redundant release prevention measures that must be applied to affected PRDs. The prevention measures in paragraph (j)(3)(ii) include: (A) Flow, temperature, level, and pressure indicators with deadman switches, monitors, or automatic actuators; (B) documented routine inspection and maintenance programs and/or operator training (maintenance programs and operator training may count as only one redundant prevention measure); (C) inherently safer designs or safety instrumentation systems; (D) deluge systems; and (E) staged relief system where initial pressure relief valves (with lower set release pressure) discharges to a flare or other closed vent system and control device. In their petition for reconsideration (Docket ID No. EPA–HQ–OAR–2010–0682–0892), API and AFPM requested clarification as to whether two prevention measures can be selected from the list in § 63.648(j)(3)(ii)(A). API and AFPM noted that the rule does not state that the measures in paragraph (j)(3)(ii)(A)

[7] Cf. 5 U.S.C. 553(d) providing a 30-day period prior to a rule taking effect.

are to be considered a single prevention measure. The Agency grouped the measures listed in subparagraph A together because of similarities they have; however, they can be separate measures. Therefore, as the EPA explains in the preamble to the April 2018 Proposal (83 FR 15464), if these measures operate independently, they are considered two separate redundant prevention measures.

What key comments were received on the requirements for redundant release prevention measures?

We did not receive any public comments on this proposed amendment.

What is the EPA's final decision on the requirements for redundant release prevention measures?

We are finalizing the amendment to § 63.648(j)(3)(ii)(A), which clarifies that independent, non-duplicative systems count as separate redundant prevention measures, as proposed.

c. Pilot-Operated PRD and Balanced Bellows PRD

What is the history of the provisions for pilot-operated PRD and balanced bellows PRD addressed in the April 2018 Proposal?

In a letter dated March 28, 2017, API and AFPM requested clarification on whether pilot-operated PRDs are required to comply with the pressure release management provisions of section 63.648(j)(1) through (3). Based on our understanding of pilot-operated PRD (see memorandum, "Pilot- operated PRD," in Docket ID No. EPA–HQ–OAR–2010–0682) and balanced bellows PRD, we proposed that pilot-operated and balanced bellows PRD are subject to the requirements in section 63.648(j)(1) and (2), but are not subject to the requirements in section 63.648(j)(3) because the primary releases from these PRD are vented to a control device. We also proposed to amend the reporting requirements in section 63.655(g)(10) and the recordkeeping requirements in section 63.655(i)(11) to retain the requirements to report and keep records of each release to the atmosphere through the pilot vent that exceeds 72 lbs/day of VOC, including the duration of the pressure release through the pilot vent and the estimate of the mass quantity of each organic HAP release.

What key comments were received on the provisions for pilot-operated PRD and balanced bellows PRD?

We received one public comment on this proposed amendment. The commenter was generally opposed to the addition of balanced bellows and pilot-operated PRD to the work practice standard requirements for PRD. The comment and the EPA's response are available in the response to comments document for this rulemaking (Docket ID No. EPA–HQ–OAR–2010–0682).

What is the EPA's final decision on the provisions for pilot-operated PRD and balanced bellows PRD?

We are finalizing these amendments as proposed.

4. Delayed Coking Unit Decoking Operation Provisions

What is the history of the delayed coking unit decoking operation provisions addressed in the April 2018 Proposal?

The provisions in 40 CFR 63.657(a) require owners or operators of DCU to depressure each coke drum to a closed blowdown system until the coke drum vessel pressure or temperature meets the applicable limits specified in the rule (2 psig or 220 degrees Fahrenheit for existing sources). Special provisions are provided in 40 CFR 63.657(e) and (f) for DCU using "water overflow" or "double-quench" method of cooling, respectively. According to 40 CFR 63.657(e), the owner or operator of a DCU using the "water overflow" method of coke cooling must hardpipe the overflow water (*i.e.,* via an overhead line) or otherwise prevent exposure of the overflow water to the atmosphere when transferring the overflow water to the overflow water storage tank whenever the coke drum vessel temperature exceeds 220 degrees Fahrenheit. The provision in 40 CFR 63.657(e) also provides that the overflow water storage tank may be an open or fixed-roof tank provided that a submerged fill pipe (pipe outlet below existing liquid level in the tank) is used to transfer overflow water to the tank.

In the October 18, 2016, reconsideration proposal, we opened the provisions in 40 CFR 63.657(e) for public comment, but we did not propose to amend the requirements. In response to the October 18, 2016, reconsideration proposal, we received several comments regarding the provisions in 40 CFR 63.657(e) for DCU using the water overflow method of coke cooling. Based on these comments, in the April 2018 Proposal we proposed amendments to the water overflow requirements in 40 CFR 63.657(e) to clarify that an owner or operator of a DCU with a water overflow design does not need to comply with the provisions in 40 CFR 63.657(e) if they comply with the primary pressure or temperature limits in 40 CFR 63.657(a) prior to overflowing any water. We also proposed to add a requirement to use a separator or disengaging device when using the water overflow method of cooling to prevent entrainment of gases from the coke drum vessel to the overflow water storage tank and we proposed that gases from the separator must be routed to a closed vent blowdown system or otherwise controlled following the requirements for a Group 1 miscellaneous process vent. As separators appear to be an integral part of the water overflow system design, we did not project any capital investment or additional operating costs associated with this proposed amendment.

What key comments were received on the delayed coking unit decoking operation provisions?

The following is a summary of the key comments received in response to our April 2018 Proposal and our responses to these comments. Detailed public comments and the EPA responses are included in the response to comments document for this final action (Docket ID EPA–HQ–OAR–2010–0682).

Comment 1: Industry commenters (–0955, –0958) stated that the proposed amendment to require DCU using the water overflow compliance option to have a disengaging device is unsupported by the record for the proposed rule and was not included in the Information Collection Request (ICR) or MACT floor analysis supporting the December 2015 Rule. The commenters noted that the EPA has not determined how many DCU use the water overflow method of coke cooling or how many will require the installation of a disengaging device, instead basing the provisions on a report by one facility using such a device. The same commenters stated that the EPA has not quantified the expected emission reductions associated with the proposed amendment to require DCU using the water overflow compliance option to have a disengaging device. One of the commenters (–0955) maintained that the emissions from the overflow water are small and sufficiently controlled via the submerged fill requirement. This commenter provided various analyses to support their contention that the emissions from their overflow water are small, including results of facility-specific industrial hygiene monitoring programs, which the commenter claims have shown that operators exposures to benzene are "orders of magnitude below the Occupational Safety and Health Administration (OSHA) exposure limit of 1.0 parts per million (ppm), at 0.003 ppm (300 parts per billion (ppb)) and

less.'' Both of these commenters also asserted that the EPA should not finalize the proposed amendment to require DCU using the water overflow compliance option to have a disengaging device.

Another commenter (–0953) asserted that the EPA did not provide any quantitative assessment of emissions from water overflow DCU compared to the primary MACT standard in order to demonstrate that the water overflow is at least as stringent as the MACT floor requirement (no draining or venting until the pressure in the drum is at or below 2 psig). According to the commenter, without this direct supporting analysis, the EPA's inclusion of the water overflow provision is arbitrary and capricious. The commenter recommended that the water overflow provisions not be finalized or that additional control requirements be placed on the storage tank receiving the water overflow. Specifically, the commenter recommended that the rule require these tanks to be vented to a control device that achieves 98-percent destruction efficiency or better. Alternatively, the commenter recommended that the EPA develop minimum requirements for the liquid height and volume of water in the receiving tank and a maximum limit on the temperature of the water in the tank. The commenter also recommended that the EPA set restrictions on the re-use of the overflow water without prior additional treatment to remove organic contaminants.

Two commenters (–0955, –0958) stated that, if the requirement to use a disengaging device is finalized, the EPA should provide a compliance date 3 years after the effective date of the rule, as provided under CAA section 112(i)(3)(A), due to the expected expense and timing needed for equipment installation to comply with this requirement. One commenter (–0955) described the specific steps required for a DCU system not equipped with a disengaging device to comply with the proposed rule including: Design, engineering, permit application submission and permit receipt, and installation, estimating it will take between 24–36 months to complete.

Response 1: We agree that we did not include the water overflow provisions in the MACT floor analysis supporting the December 2015 Rule. The MACT floor analysis resulted in a determination that emissions from the DCU must be controlled (no atmospheric venting, draining or deheading of the coke drum) until the coke drum vessel pressure is at or below 2 psig is the MACT floor. In developing an alternative compliance method, such as the DCU water overflow provisions, we are only required to ensure that the alternative being provided is at least as stringent (achieves the same or lower emissions) as the established MACT floor.

We disagree that the record does not support the proposal. In comments received on the June 30, 2014, proposed risk and technology review ''Sector Rule,'' Phillips 66 requested special provisions for water overflow (see Docket ID No. EPA–HQ–OAR–0682–0614). Further, we understood from background meetings that there are two main suppliers of DCU technology, one of which took over the ConocoPhillips technology licenses (see Docket ID No. EPA–HQ–OAR–2010–0682–0216). As Phillips 66 was an initial developer of the technology, we surmised that the DCU designed for water overflow were likely all based on the Phillips 66 design. They also noted in their comments that they operated two units with water overflow design. While the ICR supporting the December 2015 Rule did not specifically ask about the water overflow method of cooling, we did ask the height of the drum and the height of the water in the drum prior to first draining. Three DCU were reported to have water height when first draining equal to the drum height and two DCU were reported to have water height greater than the drum height. From these data, we estimated that 2 to 5 DCU used the water overflow method of cooling. We understood that Phillips 66 likely operated most of the DCU designed to use the water overflow method of cooling. Therefore, when Phillips 66 provided a water overflow DCU design that included a water-vapor disengaging drum, we expected all water overflow DCU had this design. In subsequent meetings with API and AFPM, we discussed our findings and our intention to add a requirement for a vapor disengaging drum (see Docket ID No. EPA–HQ–OAR–2010–0682–0910 and –0911). These records clearly show we carefully considered this proposed requirement and we informed industry representatives from API, AFPM, and some individual refinery representatives of our conclusions prior to the proposal.

We agree that the EPA has not provided a quantitative assessment of the emissions from the DCU when using water overflow. Rather, for the December 2015 Rule, we relied on a qualitative assessment because the precise mechanism of the emissions from the DCU is not well understood. This qualitative analysis did not consider the entrainment of gases in the overflow water or the need for the use of a disengaging drum. To support this final action, we estimated, to the best of our ability, the emissions from a typical DCU using water overflow method of cooling for units using a vapor disengaging device and one with no vapor disengaging device and compared them with the emissions projected for a DCU using conventional method of cooling complying with the 2 psig MACT standard. We found that the emissions from a DCU using water overflow method of cooling and a vapor disengaging device had emissions significantly less than a conventional DCU complying with the 2 psig standard. We also found that the emissions from a DCU using the water overflow method of cooling without a vapor disengaging device could have emissions exceeding those for a conventional DCU complying with the 2 psig pressure limit (see memorandum entitled ''Estimating Emissions from Delayed Coking Units Using the Water Overflow Method of Cooling'' in Docket ID No. EPA–HQ–OAR–2010–0682). Our emission estimates are higher than the emissions estimated by the commenter because their analyses did not consider entrained gases in the overflow water. In a follow-up meeting with this commenter, we learned that the concentration monitored near the overflow water tank was 0.3 ppm benzene (consistent with the value of 300 ppb). This concentration, while below the OSHA exposure limit of 1 ppm, is not ''orders of magnitude below'' the OSHA exposure limit and provides strong evidence that emissions near the water overflow tank are higher than would be projected based on their analysis submitted during the comment period.

Based on our analysis, we find that the water overflow method of cooling alternative achieves greater emission reductions than the primary 2 psig pressure limit when a vapor disengaging device is used for the overflow water prior to the water storage tank. Because emissions without the disengaging device in the case where the receiving tank is not vented to a control device can exceed that of a conventional DCU complying with the 2 psig pressure limit, we conclude that it is necessary for the alternative compliance method to require use of a disengaging device unless the receiving tank is vented to a control device.

Although cost consideration is not relevant for determining MACT, we disagree that the EPA did not consider the expense of installing a disengaging device. As part of the cost estimates for the DCU MACT requirements established in the December 2015 Rule,

80 FR 75226, we considered compliance costs for every DCU that did not already meet the 2 psig pressure limit. Because we already considered compliance costs in our burden estimates for the December 2015 Rule, there was no basis for assuming that compliance with the alternative standard proposed here would result in additional or otherwise different compliance costs and to do so would result in double-counting the compliance costs.

With respect to the commenter requesting additional controls on the tank receiving the water overflow, our analysis supports the conclusion that the main source of emissions from the water overflow systems is entrained vapors in the overflow water. We agree that venting the receiving tank to a control device is a reasonable alternative to using a disengaging device and we have added this as an alternative compliance option for DCU using the water overflow method of cooling. However, venting the receiving tank to a control device when a vapor disengaging device is already used is unnecessary and redundant. We agree that adding certain limitations on overflow water temperature, receiving tank water volume and temperature can help to reduce emissions when a vapor disengaging device is not used, but we do not believe adding these limitations will make water overflow without a vapor disengaging device equivalent to the primary 2 psig emission limitation. Based on our analysis, we find that the use of a disengaging device with submerged fill requirement is as stringent as the MACT floor and that additional restrictions on the receiving storage vessel for these DCU are not necessary to comply with MACT.

Finally, regarding the compliance date, we agree that it will take time to design, procure, and install a disengaging drum for those DCU using water overflow and that do not currently have a disengaging drum. Similarly, venting the receiving tank to a control device as an alternative to using a disengaging device will also require time to design and retrofit the tank with a fixed roof and closed vent system to control. We originally provided a 3-year compliance schedule due to the design, engineering, and equipment installation that could be required to meet the emission limitations for DCU in the December 2015 Rule. As the December 2015 Rule did not require a vapor disengaging drum or controlled tank and similar enhancements in the enclosed blowdown system will be needed for facilities to comply with the April 2018 Proposal, we are providing a limited compliance extension, of 2 years from the effective date of this final rule that alters the work practice standard by establishing the vapor disengaging drum requirement. This extension will only be afforded for DCU that use the water overflow method of cooling without adequate systems for a vapor disengaging device or controlled tank, which we consider to be as expeditious as practicable based on comments received on the April 2018 Proposal. We are also including operational requirements on the water overflow system for these DCU in the interim to minimize emissions to the greatest extent possible as requested by one of the commenters. These operational limits will not require any additional equipment, so implementation can occur immediately. We do not expect that these operational limits are sufficient to ensure that emissions from these units will be less than conventional DCU complying with the 2 psig standard at all times, but they will help to ensure emissions are not unrestricted in this interim period. We also note that pursuant to the provisions in § 63.6(i), which are generally applicable, refinery owners or operators may seek compliance extensions on a case-by-case basis if necessary.

What is the EPA's final decision on the delayed coking unit decoking operation provisions?

We are finalizing the requirement for DCU using the water overflow provisions in section 63.657(e) to use a separator or disengaging device to prevent entrainment of gases in the cooling water. In response to comments, we are providing a limited compliance extension, of 2 years from the effective date of this final rule, only for DCU that use the water overflow method of cooling that document the need to design, procure, and install a disengaging device, which we consider to be as expeditious as practicable based on comments received on the April 2018 Proposal. We are providing operational restrictions on these DCU in the interim to minimize emissions to the greatest extent possible. Finally, in response to comments, we are including, as an alternative to the use of a vapor disengaging drum, requirements to discharge the overflow water to a storage vessel vented to a control device (*i.e.*, a vessel meeting the requirements for storage vessels in 40 CFR part 63, subpart SS).

5. Fenceline Monitoring Provisions

What is the history of the fenceline monitoring provisions addressed in the April 2018 Proposal?

We proposed several amendments to the fenceline monitoring provisions in Refinery MACT 1. Many of the proposed revisions to the fenceline monitoring provisions are related to requirements for reporting monitoring data.

The December 2015 Rule included new EPA Methods 325A and B specifying monitor siting and quantitative sample analysis procedures. Method 325A requires an additional monitor be placed near known VOC emission sources if the VOC emissions source is located within 50 meters of the monitoring perimeter and the source is between two monitors. In the April 2018 Proposal, we proposed an alternative to the additional monitor siting requirements if the only known VOC emission sources within 50 meters of the monitoring perimeter between two monitors are pumps, valves, connectors, sampling connections, and open-ended line sources. The proposed alternative requires that these sources be actively monitored monthly using audio, visual, or olfactory means and quarterly using Method 21 or the AWP for equipment leaks.

In addition, we proposed to revise the quarterly reporting requirements in section 63.655(h)(8) to specify that it means calendar year quarters (*i.e.*, Quarter 1 is from January 1 to March 31; Quarter 2 is from April 1 through June 30; Quarter 3 is from July 1 through September 30; and Quarter 4 is from October 1 through December 31) rather than being tied to the date compliance monitoring began.

We also proposed to require one field blank per sampling period rather than two as currently required. Similarly, we proposed to decrease the number of duplicate samples that must be collected each sampling period. Instead of requiring a duplicate sample for every 10 monitoring locations, we proposed that facilities with 19 or fewer monitoring locations be required to collect one duplicate sample per sampling period and facilities with 20 or more sampling locations be required to collect two duplicate samples per sampling period. We also proposed to require that duplicate samples be averaged together to determine the sampling location's benzene concentration for the purposes of calculating the benzene concentration difference (Δc).

Consistent with the requirements in section 63.658(k) for requesting an alternative test method for collecting

and/or analyzing samples, we also proposed to revise the Table 6 entry for section 63.7(f) to indicate that section 63.7(f) applies except that alternatives directly specified in 40 CFR part 63, subpart CC, do not require additional notification to the Administrator or the approval of the Administrator.

What key comments were received on the fenceline monitoring provisions?

We received minor comments on these proposed revisions. The comment summaries and the EPA responses are available in the response to comments document for this final rule (Docket ID No. EPA–HQ–OAR–2010–0682).

What is the EPA's final decision on the fenceline monitoring provisions?

The proposed revisions to the fenceline monitoring requirements, as described above, are being finalized as proposed with one minor change. In the April 2018 proposal, § 63.655(h)(8)(viii) specified that CEDRI would calculate the biweekly concentration difference (Δc) for benzene for each sampling period and the annual average Δc for benzene for each sampling period. However, in order to accurately reflect CEDRI's current configuration, we are finalizing § 63.655(h)(8)(viii) to require the reporter to calculate and report the values of the biweekly and annual average Δc for benzene.

6. Storage Vessel Provisions

What is the history of the storage vessel provisions addressed in the April 2018 Proposal?

We received comments from API and AFPM in their February 1, 2016, petition for reconsideration regarding the incorporation of 40 CFR part 63, subpart WW, storage vessel provisions and 40 CFR part 63, subpart SS, closed vent systems and control device provisions into Refinery MACT 1 requirements for Group 1 storage vessels at 40 CFR 63.660. The pre-amended version of the Refinery MACT 1 rule specified (by cross reference at 40 CFR 63.646) that storage vessels containing liquids with a vapor pressure of 76.6 kilopascals (approximately 11 pounds per square inch (psi)) or greater must be vented to a closed vent system or to a control device consistent with the requirements in section 63.119 of the HON. API and AFPM pointed out that the EPA did not retain this provision at 40 CFR 63.660 in the December 2015 Rule. We agree that the language was inadvertently omitted. We did not intend to deviate from the longstanding requirement limiting the vapor pressure of material that can be stored in a floating roof tank. Therefore, we proposed to revise the introductory text in 40 CFR 63.660 to clarify that owners or operators of affected Group 1 storage vessels storing liquids with a maximum true vapor pressure less than 76.6 kilopascals (11.0 psi) can comply with either the requirements in 40 CFR part 63, subpart WW or SS, and that owners or operators storing liquids with a maximum true vapor pressure greater than or equal to 76.6 kilopascals (11.0 psi) must comply with the requirements in 40 CFR part 63, subpart SS.

We also received comments from API and AFPM in their February 1, 2016, petition for reconsideration regarding provisions in section 63.660(b). Section 63.660(b)(1) allows Group 1 storage vessels to comply with alternatives to those specified in section 63.1063(a)(2) of subpart WW. Section 63.660(b)(2) specifies additional controls for ladders having at least one slotted leg. The petitioners explained that section 63.1063(a)(2)(ix) provides extended compliance time for these controls, but that it is unclear whether this additional compliance time extends to the use of the alternatives to comply with section 63.660(b). We proposed language to clarify that the additional compliance time specified in the alternative included at section 63.1063(a)(2) applies to the implementation of controls in section 63.660(b).

We also proposed language to clarify at section 63.660(e) that the initial inspection requirements that apply with initial filling of the storage vessels are not required again if a vessel transitions from the existing source requirements in section 63.646 to new source requirements in section 63.660.

The following is a summary of the comment received in response to our April 2018 Proposal and our response to this comment. We did not receive any other comments related to the proposed amendments for storage vessels.

What comment was received on the storage vessel provisions?

Comment 1: One commenter (–0958) claims that the EPA proposed revisions to the introductory paragraph of section 63.660 to allow certain storage vessels to comply with alternative requirements is not an acceptable control measure. The commenter states that the proposed revisions included 11.0 psia as parenthetical equivalent to the 76.6 kPa threshold. The commenter recommended that the EPA revise the 11.0 psia to 11.1 psia as this represents a more accurate conversion and consistency with historical regulations.

Response 1: Upon reviewing this issue, we agree with the commenter that 11.1 psia is the correct value to use when converting 76.6 kilopascals to psia and we are revising the proposed language to use 11.1 psia rather than 11.0 psia in this introductory paragraph.

What is the EPA's final decision on the storage vessel provisions?

After considering public comments on the proposed amendments, the EPA is finalizing the amendment to the introductory text in 40 CFR 63.660 with a change from 11.0 psia to 11.1 psia. We are finalizing the amendments to section 63.660(b) and section 63.660(e) as proposed.

7. Flare Control Device Provisions

What is the history of the flare control device provisions addressed in the April 2018 Proposal?

API and AFPM requested clarification in a December 1, 2016, letter to the EPA (Docket ID No. EPA–HQ–OAR–2010–0682–0913) regarding assist steam line designs that entrain air into the lower or upper steam at the flare tip. The industry representatives noted that many of the steam-assisted flare lines have this type of air entrainment and likely were part of the dataset analyzed to develop the standards established in the December 2015 Rule for steam-assisted flares. API and AFPM, therefore, maintain that these flares should not be considered to have assist air, and that they are appropriately and adequately regulated under the final standards in the December 2015 Rule for steam-assisted flares. Because flares with assist air are required to comply with both a combustion zone net heating value (NHV_{cz}) and a net heating value dilution parameter (NHV_{dil}), there is increased burden in having to comply with two operating parameters, and API and AFPM contend that this burden is unnecessary.

In the preamble to the April 2018 Proposal, we stated that air intentionally entrained through steam nozzles meets the definition of assist air. However, we also noted that if this is the only assist air introduced prior to or at the flare tip, it is reasonable in most cases for the owner or operator to only need to comply with the NHV_{cz} operating limit. We also noted that, for flare tips with an effective tip diameter of 9 inches or more, there are no flare tip steam induction designs that can entrain enough assist air to cause a flare operator to have a deviation of the NHV_{dil} operating limit without first deviating from the NHV_{cz} operating limit. Therefore, we proposed in section 63.670(f)(1) to allow owners or operators of flares whose only assist air is from perimeter assist air entrained in lower

and upper steam at the flare tip and with a flare tip diameter of 9 inches or greater to comply only with the NHV_{cz} operating limit. Steam-assisted flares with perimeter assist air and an effective tip diameter of less than 9 inches would remain subject to the requirement to account for the amount of assist air intentionally entrained within the calculation of NHV_{dil}. We further proposed to add provisions to section 63.670(i)(6) specifying that owners or operators of these smaller diameter steam-assisted flares use the steam flow rate and the maximum design air-to-steam ratio of the steam tube's air entrainment system for determining the flow rate of this assist air.

We also proposed several clarifying amendments for flares in response to API and AFPM's February 1, 2016, petition for reconsideration (Docket ID No. EPA–HQ–OAR–2010–0682–0892) as outlined below.

- For air assisted flares, we proposed to amend section 63.670(i)(5) to include provisions for continuously monitoring fan speed or power and using fan curves for determining assist air flow rates to clarify that this is an acceptable method of determining air flow rates.
- We proposed two amendments relative to the visible emissions monitoring requirements in section 63.670(h) and (h)(1). We proposed to clarify that the initial 2-hour visible emission demonstration should be conducted the first time regulated materials are routed to the flare. We also proposed to amend section 63.670(h)(1) to clarify that the daily 5-minute observations must only be conducted on days the flare receives regulated materials and that the additional visible emissions monitoring is specific to cases when visible emissions are observed while regulated material is routed to the flare.
- We proposed to amend section 63.670(o)(1)(iii)(B) to clarify that the owner or operator must establish the smokeless capacity of the flare in a 15-minute block average and to amend section 63.670(o)(3)(i) to clarify that the exceedance of the smokeless capacity of the flare is based on a 15-minute block average.

What comments were received on the flare control device provisions?

The following is a summary of one comment received in response to our April 2018 Proposal and our response to this comment. All other comments related to the proposed amendments for the flare provisions are included in the response to comments document for this final action (Docket ID No. EPA–HQ–2010–0682).

Comment 1: One commenter (–0958) explained that assist air may only be entrained in upper steam. Thus, they requested that the proposed revision to section 63.670(f)(1) and section 63.670(i)(6) be changed from "lower and upper" to "lower and/or upper." The commenter also requested that the EPA clarify that the tip diameter referenced in section 63.670(i)(6) is the effective diameter as defined in section 63.670(n)(1) and section 63.670(k)(1). Finally, the commenter requested that the EPA clarify that section 63.670(i)(6) applies to flares with an effective diameter less than 9 inches and stated that perimeter air monitoring for a steam-assisted flare with an effective diameter equal to or greater than 9 inches is not required.

Response 1: We did not mean to limit the air entrainment provisions to only instances where air is entrained in both lower and upper steam at the flare tip. We agree that the language "lower and/or upper steam" is more accurate and consistent with our intent. We also agree that we should refer to the "effective diameter" of the flare tip as defined in the equation for NHV_{dil} in section 63.670(n)(1). This clarification was made in section 63.670(f)(1); this term is not used in section 63.670(i)(6).

What is the EPA's final decision on the flare control device provisions?

After considering the comments, we are finalizing the proposed amendment in section 63.670(f)(1) and section 63.670(i)(6) with a change in language from "lower and upper" to "lower and/or upper." We are also finalizing the proposed amendment in section 63.670(f)(1) with a change in language from "flare tip diameter" to "effective diameter," a term that is defined in section 63.670(n)(1) and section 63.670(k)(1). The proposed clarifying amendments related to air assisted flares, visible emissions monitoring requirements, and smokeless capacity of the flare are being finalized as proposed.

8. Recordkeeping and Reporting Provisions

What is the history of the recordkeeping and reporting provisions addressed in the April 2018 Proposal?

We proposed several clarifying amendments for recordkeeping and reporting requirements in response to questions received from API and AFPM as well as in response to API and AFPM's March 28, 2017, letter (Docket ID No. EPA–HQ–OAR–2010–0682–0915).

Refinery owners or operators must submit a NOCS with 150 days of the compliance date associated with the provisions in the December 2015 Rule. We proposed to amend sections 63.655(f) and (f)(6) to provide that sources having a compliance date on or after February 1, 2016, may submit the NOCS in the periodic report rather than as a separate submission.

We proposed several amendments for electronic reporting requirements at sections 63.655(f)(1)(i)(B)(3) and (C)(2), (f)(1)(iii), (f)(2), and (f)(4) to clarify that when the results of performance tests or evaluations are reported in the NOCS, the results are due by the date the NOCS is due, whether the results are reported via Compliance and Emissions Data Reporting Interface (CEDRI) or in hard copy as part of the NOCS report. If the results are reported via CEDRI, we also proposed to specify that sources need not resubmit those results in the NOCS, but may instead submit specified information identifying that a performance test or evaluation was conducted and the units and pollutants that were tested. We also proposed to add the phrase "Unless otherwise specified by this subpart" to sections 63.655(h)(9)(i) and (ii) to make clear that test results associated with a NOCS report are due at the time the NOCS is due and not within 60 days of completing the performance test or evaluation. We also proposed to amend several references in Table 6—General Provisions Applicability to Subpart CC that discuss reporting requirements for performance tests or performance evaluations.

We proposed to revise the provision in section 63.655(h)(10) to include processes to assert claims of EPA system outage or *force majeure* events as a basis for extending the electronic reporting deadlines.

We also proposed to revise section 63.655(i)(5) to restore the subparagraphs which were inadvertently not included in the published CFR due to a clerical error.

The amendments to section 63.655(h)(5)(iii) included in the December 2015 Rule (80 FR 75247) were not included in the regulations as published by the CFR. As reflected in the instructions to the amendments, we intended for the option to use an automated data compression recording system to be an approved monitoring alternative. In addition, in reviewing this amendment, the EPA noted that 40 CFR 63.655(h)(5) specifically addresses mechanisms for owners or operators to request approval for alternatives to the continuous operating parameter monitoring and recordkeeping provisions, while the provisions in 40 CFR 63.655(i)(3) specifically include

options already approved for continuous parameter monitoring system (CPMS). Consistent with our intent for the use of an automated data compression recording system to be an approved monitoring alternative, we proposed to move paragraph 63.655(h)(5)(iii) to 63.655(i)(3)(ii)(C).

Finally, we proposed a number of editorial and other corrections in Table 2 of the April 2018 Proposal (83 FR 15470).

What significant comments were received on the recordkeeping and reporting provisions?

The following is a summary of the significant comments received in response to our April 2018 Proposal and our response to these comments. All other comments related to the proposed amendments for the recordkeeping and reporting provisions are included in the response to comments document for this final action (Docket ID No. EPA–HQ–2010–0682).

Comment 1: One commenter (–0958) objected to the proposed revisions to section 63.655(f) and section 63.655(f)(6) which require facilities to include their NOCS in the periodic report following the compliance activity. The commenter suggested that the EPA revert to the 150-day NOCS submission requirements as was included in the December 2015 Rule amendments for the sources listed in Table 11 of 40 CFR part 63, subpart CC, which have a compliance date on or after February 1, 2016. The commenter explained that for petroleum refinery owners and operators completing compliance activities requiring an NOCS in the latter half of the periodic reporting period, as little as 60 days could be provided to perform the test and generate the submission in order to include it in the periodic report.

Response 1: The proposed revisions were specifically included to address the commenter's original request to align the new compliance notifications with the semiannual periodic reports to reduce burden. As the commenter has withdrawn the request for these revisions, we are not finalizing these proposed revisions.

Comment 2: One commenter (–0958) supported the proposed revision allowing petroleum refinery owners and operators to request an extension for reporting under specified circumstances. One such circumstance is if the EPA's electronic reporting systems is out-of-service in the five business days prior to the report due date. Proposed revisions in section 63.655(h)(10)(i) and section 63.1575(l)(1) require the extension request to include the date, time, and length of the electronic reporting system outage. The commenter requested that the EPA remove these details from the requirements for the extension request as this is information the EPA, rather than the reporter, keeps. The commenter suggested that the EPA could require reporters to identify the dates on which they attempted to access the system in the 5-day period preceding the reporting due date.

Response 2: We agree with the commenter. While users may know the length of time for a planned outage, as this information is provided to users, it is unlikely that a user will know the length of time for an unplanned outage. However, users will know the dates and times that they attempted but were unable to access the system. Therefore, we have revised the language in section 63.655(h)(10)(i) and section 63.1575(l)(1) to state that owner or operators must provide information on the date(s) and time(s) the Central Data Exchange (CDX) or the CEDRI was unavailable when the user attempted to access it in the 5 business days prior to the submission deadline.

What is the EPA's final decision on the recordkeeping and reporting provisions?

In response to the public comments received, we are not finalizing the proposed amendments to section 63.655(f) and section 63.655(f)(6) which require facilities to include their NOCS in the periodic report following the compliance activity.

Also in response to the public comments received, we are finalizing the proposed amendment to section 63.655(h)(10) with changes. In the final rule, a refinery owner or operator's request for an extension must include information on the date(s) and time(s) the CDX or the CEDRI was unavailable when the user attempted to access it in the 5 business days prior to the submission deadline, rather than requiring information regarding the length of the outage.

We are finalizing the amendments to the electric reporting requirements in sections 63.655(f)(1)(i)(B)(3) and (C)(2), (f)(1)(iii), (f)(2), and (f)(4), sections 63.655(h)(9)(i) and (ii), and Table 6—General Provisions Applicability to 40 CFR part 63, subpart CC, as proposed.

We are finalizing the restoration of paragraph 63.655(i)(5), as proposed. We are also finalizing moving paragraph 63.655(h)(5)(iii) to 63.655(i)(3)(ii)(C), as proposed. We are also finalizing the editorial and other corrections in Table 2 of the April 2018 Proposal (83 FR 15470), as proposed.

B. Clarifications and Technical Corrections to Refinery MACT 2

1. FCCU Provisions

What is the history of the FCCU provisions addressed in the April 2018 Proposal?

In order to demonstrate compliance with the alternative particulate matter (PM) standard for FCCU as provided at section 63.1564(a)(5)(ii), the outlet (exhaust) gas flow rate of the catalyst regenerator must be determined. As provided in section 63.1573(a), owners or operators may determine this flow rate using a flow CPMS or an alternative. Currently, the language in section 63.1573(a) restricts the use of the alternative to occasions when "the unit does not introduce any other gas streams into the catalyst regenerator vent." API and AFPM (Docket ID No. EPA–HQ–OAR–2010–0682–0915) claim that while this restriction is appropriate for determining the flow rate for applying emissions limitations downstream of the regenerator because additional gases introduced to the vent would not be measured using this method, it is not a necessary constraint for determining compliance with the alternative PM limit. This is because the alternative PM standard applies at the outlet of the regenerator prior to the primary cyclone inlet and this is the flow measured by the alternative in section 63.1573(a). As described in the preamble of the April 2018 Proposal (83 FR 15471). We proposed to amend section 63.1573(a) to remove that restriction.

Additionally, API and AFPM noted in their February 1, 2016, petition (EPA–HQ–OAR–2010–0682–0892) for reconsideration that the FCCU alternative organic HAP standard for startup, shutdown, and hot standby in section 63.1565(a)(5)(ii) requires maintaining the oxygen concentration in the regenerator exhaust gas at or above 1 volume percent (dry) (*i.e.,* greater than or equal to 1-percent oxygen (O_2) measured on a dry basis); however, they claim process O_2 analyzers measure O_2 on a wet basis. As described in the preamble of the April 2018 Proposal (83 FR 15471), meeting the 1-percent O_2 standard on a wet basis measurement will always mean that there is more O_2 than if the concentration value is corrected to a dry basis. As such, we proposed to amend section 63.1565(a)(5)(ii) and Table 10 to allow for the use of a wet O_2 measurement for demonstrating compliance with the standard so long as it is used directly with no correction for moisture content.

The following is a summary of the one comment received in response to our April 2018 Proposal and our response to this comment on the proposed amendments to the FCCU provisions.

What comment was received on the FCCU provisions?

Comment 1: One commenter (–0958) supported the EPA's proposed revisions to section 63.1573(a)(1), which allows the use of the inlet velocity requirement during periods of startup, shutdown, and malfunction (SSM) for an FCCU as an alternative to the PM standard regardless of the configuration of the catalytic regenerator exhaust vent stream. The same commenter suggested additional clarifications relative to the alternative PM standard. These clarifications include:

(1) Amending the last sentence in section 63.1573(a)(1) to clarify that the requirement to use the same procedure for performance tests and subsequent monitoring does not apply to the use of the alternative in section 63.1564(c)(5), since the alternative only applies during SSM.

(2) Revising the first sentence of section 63.1573(a)(2) to specifically allow use for demonstrating compliance with section 63.1564(c)(5).

(3) Amending the footnote to Item 12 in Table 3 to make it clear that either alternative in (a)(1) or (a)(2) is acceptable for demonstrating compliance. The commenter also recommended providing a separate footnote as other items reference footnote 1.

(4) Adding the footnote from Item 12 in Table 3 to Item 10 in Table 7.

Response 1: We agree with the commenter that the last sentence in section 63.1573(a)(1) is provided to ensure that the operating limits are established using the same monitoring techniques as the on-going monitoring. As no site-specific operating limit is required for compliance with section 63.1564(c)(5), that requirement is not applicable to this additional allowance of this alternative. We are revising the language in the final rule to clarify.

We disagree that it is appropriate to revise the first sentence in section 63.1573(a)(2), as requested by the commenter, because the flow rate must be determined based on actual flow conditions, not standard conditions; therefore, Equation 2 in section 63.1573 is not applicable to demonstrate compliance with section 63.1564(c)(5).

What is the EPA's final decision on the FCCU provisions?

In consideration of public comments, we are finalizing the amendments to the FCCU provisions, as proposed with one change to section 63.1573(a) to clarify that the provision does not apply to the use of the alternative in section 63.1564(c)(5).

2. Other Provisions

What is the history of the other Refinery MACT 2 provisions addressed in the April 2018 Proposal?

We proposed several clarifying amendments for other Refinery MACT 2 requirements in response to API and AFPM's petition for reconsideration (Docket ID No. EPA–HQ–OAR–2010–0682–0892) as well as in response to the API and AFPM's March 28, 2017, letter (Docket ID No. EPA–HQ–OAR–2010–0682–0915).

We proposed to amend section 63.1572(d)(1) to be consistent with the analogous language in section 63.671(a)(4).

We proposed to amend the recordkeeping requirements in section 63.1576(a)(2)(i) to apply only when facilities elect to comply with the alternative startup and shutdown standards provided in section 63.1564(a)(5)(ii), section 63.1565(a)(5)(ii), or sections 63.1568(a)(4)(ii) or (iii).

We proposed several amendments for electronic reporting including at section 63.1574(a)(3) to clarify that the results of performance tests conducted to demonstrate initial compliance are to be reported by the due date of the NOCS whether the results are reported via CEDRI or in hard copy as part of the NOCS report. If the results are reported via CEDRI, we also proposed to specify that sources need not resubmit those results in the NOCS, but may instead submit information identifying that a performance test or evaluation was conducted and the units and pollutants that were tested. We also proposed to amend the submission of the results of periodic performance tests and the 1-time hydrogen cyanide (HCN) test required in sections 63.1571(a)(5) and (6) to require inclusion with the semiannual compliance reports as specified in section 63.1575(f) instead of within 60 days of completing the performance evaluation. Similarly, we proposed to streamline reporting of the results of performance evaluations and continuous monitoring systems (as provided in item 2 to Table 43) to align with the semiannual compliance reports as specified in section 63.1575(f) rather than requiring a separate submission. We also proposed to add the phrase "Unless otherwise specified by this subpart" to sections 63.1575(k)(1) and (2) to make clear that performance tests or performance evaluations required to be reported in a NOCS report or a semiannual compliance report are not subject to the 60-day deadline specified in the paragraphs. We also proposed to add section 63.1575(l) to address extensions to electronic reporting deadlines. We also proposed clarifying amendments to several references in Table 44—Applicability of NESHAP General Provisions to 40 CFR part 63, subpart UUU.

Finally, we proposed a number of editorial and other corrections in Table 3 of the April 2018 Proposal (83 FR 15472).

The following is a summary of the significant comments received in response to our April 2018 Proposal and our response to these comments. It should be noted that the comment summary and response for the reporting extension in section 63.655(h)(10)(i) and section 63.1575(l)(1) is addressed in section III.A.8 of this preamble. All other comments related to the proposed amendments for the other Refinery MACT 2 provisions are included in the response to comments document for this final action (Docket ID No. EPA–HQ–2010–0682).

What significant comment was received on the other Refinery MACT 2 provisions?

Comment 1: One commenter (–0958) recommended that the EPA revise the proposed requirement in section 63.1571(a), (a)(5), (a)(6), and Table 6 Item 1.ii to complete initial PM (or nickel) performance test within 60 days of startup for new units to instead allow for completion and reporting of the performance test by the 150-day notice of compliance status date since a new unit may not be up to full production rates within the first 60 days.

Response 1: In reviewing the existing provisions regarding performance tests in Refinery MACT 2 (40 CFR part 63, subpart UUU), we agree that the initial performance tests are required to be completed and reported no later than 150 days after the compliance date (see section 63.1574(a)(3)(ii)). To better align the proposed revisions with the existing requirements, we are revising the proposed requirement to complete and report these tests no later than 150 days after the compliance date (see section 63.1574(a)(3)(ii)).

What is the EPA's final decision on the other Refinery MACT 2 provisions?

After considering public comment, we are finalizing these amendments with some revisions to the due dates for initial performance tests in sections 63.1571(a), (a)(5), (a)(6), and Table 6

Item 1.ii as well as edits to the proposed language in the extensions to electronic reporting provisions in section 63.1575(l) (as described in section III.A.8 of this preamble). We are finalizing the amendments at section 63.1572(d)(1), section 63.1576(a)(2)(i), and Table 3 of the April 2018 Proposal (83 FR 15472), as proposed.

C. Clarifications and Technical Corrections to NSPS Ja

We proposed three revisions in NSPS Ja to improve consistency, remove redundancy, and correct grammar at section 60.105a(b)(2)(ii), section 60.106a(a)(1)(vi), and section 60.106a(a)(1)(iii), respectively. We did not receive public comments on these proposed amendments. We are finalizing these amendments as proposed.

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

As described in the April 2018 Proposal and associated memorandum titled, ''Projected Cost and Burden Reduction for the Proposed Amendments of the 2015 Risk and Technology Review: Petroleum Refineries,'' (Docket ID No. EPA–HQ–OAR–2010–0682–0925), the technical corrections and clarifications included in this final rule are expected to result in overall cost and burden reductions. Consistent with the April 2018 Proposal, the final amendments expected to reduce burden are: Revisions of the maintenance vent provisions related to the availability of a pure hydrogen supply for equipment containing pyrophoric catalyst, revisions of recordkeeping requirements for maintenance vents associated with equipment containing less than 72 lbs/day VOC, inclusion of specific provisions for pilot-operated and balanced bellows PRDs, and inclusion of specific provisions related to steam tube air entrainment for flares. The other final amendments included in this rulemaking will have an insignificant effect on the costs or burdens associated with the standards. Additionally, none of the final amendments are projected to appreciably impact the emissions reductions associated with these standards.

We are finalizing the provisions for maintenance vent recordkeeping and PRD as proposed, and, thus, the cost and burden reductions estimated in the April 2018 Proposal and supporting memorandum are still accurate. The final revisions to the recordkeeping requirements for maintenance vents associated with equipment containing less than 72 lbs/day VOC are estimated to yield savings of approximately $677,000 per year considering the actual estimated annualized burden of the December 2015 Rule. The final provisions for pilot-operated and balanced bellows PRDs included in this final rulemaking yield a reduction in capital investment of $1.1 million and a reduction in annualized costs of $330,000 per year considering the actual estimated annualized burden of the December 2015 Rule.

It should be noted that we are finalizing amendments to the proposed provisions for maintenance vent provisions related to the availability of a pure hydrogen supply for equipment containing pyrophoric catalyst and provisions related to steam tube air entrainment for flares with revisions as described in sections III.A.2 and III.A.7 of this preamble. The revisions described in sections III.A.2 and III.A.7 are not expected to impact the cost and burden reductions estimated in the referenced April 2018 Proposal and memorandum for these provisions, as they are clarifying in nature.

As explained in the April 2018 Proposal, there were no capital costs estimated for the maintenance vent provisions in the December 2015 Rule and only limited recordkeeping and reporting costs. Capital investment estimates provided by industry stakeholders for the maintenance vent provisions included in the December 2015 Rule was approximately $76 million. The inclusion of the capital costs for the maintenance vent provisions would have increased the previously estimated annualized cost included in the December 2015 Rule by $7,174,400 per year. Through the revisions being finalized in this rule, these costs will not be incurred by refinery owners and operators. Similarly, while significant capital and operating costs were projected for flares, we may have underestimated the number of steam-assisted flares that would also have to demonstrate compliance with the NHV_{dil} operating limit in the December 2015 Rule impacts analysis. Considering such flares, the annualized cost of the December 2015 Rule for steam-assisted flares would have increased the previously estimated annualized cost included in the December 2015 Rule by $3,300,000 per year. Through the revisions being finalized in this rulemaking which allows owners or operators of certain steam-assisted flares with air entrainment at the flare tip to comply only with the NHV_{cz} operating limits, these costs will not be incurred by refinery owners and operators.

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 a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is considered an Executive Order 13771 deregulatory action. Details on the estimated cost savings of this final rule can be found in the EPA's analysis of the present value and annualized value estimates associated with this action located in Docket ID No. EPA–HQ–OAR–2010–0682.

C. Paperwork Reduction Act (PRA)

The information collection activities in this rule have been submitted for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 1692.12. 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.

One of the final technical amendments included in this rule impacts the recordkeeping requirements in 40 CFR part 63, subpart CC for certain maintenance vents associated with equipment containing less than 72 lbs/day VOC as found at 40 CFR 63.655(i)(12)(iv). The new recordkeeping requirement specifies records used to estimate the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 72 lbs/day of VOC at the time of the maintenance vent opening be maintained. As specified in 40 CFR 63.655(i)(12)(iv), additional records are required if the inventory procedures were not followed for each maintenance vent opening or if the equipment opened exceeded the type and size limits (*i.e.,* 72 lbs/day VOC). These additional records include identification of 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. These records will assist the EPA with determining compliance with the standards set forth in 40 CFR 63.643(c)(iv).

Respondents/affected entities: Owners or operators of existing or new major source petroleum refineries that are major sources of HAP emissions. The NAICS code is 324110 for petroleum refineries.

Respondent's obligation to respond: All data in the ICR that are recorded are required by the amendments to 40 CFR part 63, subpart CC, National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries.

Estimated number of respondents: 142.

Frequency of response: Once per year per respondent.

Total estimated burden: 16 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $1,640 (per year), includes $0 annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for 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)

I certify 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 impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. The action consists of amendments, clarifications, and technical corrections which are expected to reduce regulatory burden. As described in section IV of this preamble, we expect burden reduction for: (1) Revisions of the maintenance vent provisions related to the availability of a pure hydrogen supply for equipment containing pyrophoric catalyst, (2) revisions of recordkeeping requirements for maintenance vents associated with equipment containing less than 72 lbs/day VOC, (3) inclusion of specific provisions for pilot-operated and balanced bellows PRDs, and (4) inclusion of specific provisions related to steam tube air entrainment for flares. Furthermore, as noted in section IV of this preamble, we do not expect the final amendments to change the expected economic impact analysis performed for the existing rule. We have, therefore, concluded that this action will relieve regulatory burden for all directly regulated small entities.

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 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, 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 effect 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 this action.

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

This action is not subject to Executive Order 13045 because it is not economically significant as defined in 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 amendments serve to make technical clarifications and corrections, as well as revise compliance dates. We expect the final revisions will have an insignificant effect on emission reductions. Therefore, the final amendments should not appreciably increase risk for any populations.

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 rulemaking involves technical standards. As described in section III.C of this preamble, the EPA has decided to use the voluntary consensus standard ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," as an acceptable alternative to EPA Methods 3A and 3B for the manual procedures only and not the instrumental procedures. This method is available at the American National Standards Institute (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. See *https://wwww.ansi.org* and *https://www.asme.org*.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The final amendments serve to make technical clarifications and corrections, as well as revise compliance dates. We expect the final technical clarifications and corrections will have an insignificant effect on emission reductions. The additional compliance time provided for existing maintenance vents is expected to have an insignificant effect on emission reductions as many refiners already have measures in place due to state and other federal requirements to minimize emissions during these periods. Further, the maintenance vent opening periods are relatively infrequent and are usually of short duration. Additionally, the final compliance date only provides approximately 6 months beyond the August 1, 2018, compliance date for most facilities, which are operating under 1-year compliance extensions (from the previous deadline of August 1, 2017) they received from states based on the procedure in 40 CFR 63.6(i). Therefore, the final amendments should

not appreciably increase risk for any populations.

L. Congressional Review Act (CRA)

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

List of Subjects

40 CFR Part 60

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

40 CFR Part 63

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

Dated: November 8, 2018.

Andrew R. Wheeler,

Acting Administrator.

For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

■ 1. The authority citation for part 60 continues to read as follows:

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

Subpart A—General Provisions

■ 2. Section 60.17 is amended by revising paragraph (g)(14) to read as follows:

§ 60.17 Incorporations by reference.

* * * * *

(g) * * *

(14) ASME/ANSI PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], (Issued August 31, 1981), IBR approved for §§ 60.56c(b), 60.63(f), 60.106(e), 60.104a(d), (h), (i), and (j), 60.105a(b), (d), (f), and (g), 60.106a(a), 60.107a(a), (c), and (d), tables 1 and 3 to subpart EEEE, tables 2 and 4 to subpart FFFF, table 2 to subpart JJJJ, §§ 60.285a(f), 60.4415(a), 60.2145(s) and (t), 60.2710(s), (t), and (w), 60.2730(q), 60.4900(b), 60.5220(b), tables 1 and 2 to subpart LLLL, tables 2 and 3 to subpart MMMM, §§ 60.5406(c), 60.5406a(c), 60.5407a(g), 60.5413(b), 60.5413a(b), and 60.5413a(d).

* * * * *

Subpart Ja—Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007

■ 3. Section 60.105a is amended by revising paragraph (b)(2)(ii) to read as follows:

§ 60.105a Monitoring of emissions and operations for fluid catalytic cracking units (FCCU) and fluid coking units (FCU).

* * * * *

(b) * * *

(2) * * *

(ii) The owner or operator shall conduct performance evaluations of each CO_2 and O_2 monitor according to the requirements in § 60.13(c) and Performance Specification 3 of appendix B to this part. The owner or operator shall use Method 3, 3A or 3B of appendix A–2 to this part for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses,'' (incorporated by reference—see § 60.17) is an acceptable alternative to EPA Method 3B of appendix A–2 to part 60.

* * * * *

■ 4. Section 60.106a is amended by revising paragraph (a)(1)(iii) to read as follows:

§ 60.106a Monitoring of emissions and operations for sulfur recovery plants.

(a) * * *

(1) * * *

(iii) The owner or operator shall conduct performance evaluations of each SO_2 monitor according to the requirements in § 60.13(c) and Performance Specification 2 of appendix B to part 60. The owner or operator shall use Method 6 or 6C of appendix A–4 to part 60. The method ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses,'' (incorporated by reference—see § 60.17) is an acceptable alternative to EPA Method 6.

* * * * *

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

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

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

Subpart CC—National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries

■ 6. Section 63.641 is amended by:

■ a. Revising the definitions of ''Flare purge gas'' and ''Flare supplemental gas'';

■ b. Adding a definition of ''Pressure relief device'' in alphabetical order;

■ c. Revising the introductory text and adding paragraphs (1)(i) and (ii) to the definition of ''Reference control technology for storage vessels''; and

■ d. Revising the definition of ''Relief valve''.

The revisions and addition read as follows:

§ 63.641 Definitions.

* * * * *

Flare purge gas means gas introduced between a flare header's water seal and the flare tip to prevent oxygen infiltration (backflow) into the flare tip or for other safety reasons. For a flare with no water seal, the function of *flare purge gas* is performed by flare sweep gas and, therefore, by definition, such a flare has no *flare purge gas.*

Flare supplemental gas means all gas introduced to the flare to improve the heat content of combustion zone gas. *Flare supplemental gas* does not include assist air or assist steam.

* * * * *

Pressure relief device means 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 pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. 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.

* * * * *

Reference control technology for storage vessels means either:

(1) * * *

(i) An internal floating roof, including an external floating roof converted to an internal floating roof, meeting the specifications of § 63.1063(a)(1)(i), (a)(2), and (b) and § 63.660(b)(2);

(ii) An external floating roof meeting the specifications of § 63.1063(a)(1)(ii), (a)(2), and (b) and § 63.660(b)(2); or

* * * * *

Relief valve means a type of pressure relief device that is designed to re-close after the pressure relief.

* * * * *

■ 7. Section 63.643 is amended by:
■ a. Revising paragraphs (c) introductory text, (c)(1) introductory text, and (c)(1)(ii) through (iv); and
■ b. Adding a new paragraph (c)(1)(v).

The revisions and addition read as follows:

§ 63.643 Miscellaneous process vent provisions.

* * * * *

(c) An owner or operator may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed or placed into service. The owner or operator does not need to designate a maintenance vent as a Group 1 or Group 2 miscellaneous process vent nor identify maintenance vents in a Notification of Compliance Status report. The owner or operator must comply with the applicable requirements in paragraphs (c)(1) through (3) of this section for each maintenance vent according to the compliance dates specified in table 11 of this subpart, unless an extension is requested in accordance with the provisions in § 63.6(i).

(1) Prior to venting to the atmosphere, process liquids are removed from the equipment as much as practical and the equipment is depressured to a control device meeting requirements in paragraphs (a)(1) or (2) of this section, a fuel gas system, or back to the process until one of the following conditions, as applicable, is met.

* * * * *

(ii) If there is no ability to measure the LEL 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 LEL 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.

(iii) The equipment served by the maintenance vent contains less than 72 pounds of total volatile organic compounds (VOC).

(iv) If the maintenance vent is associated with equipment containing pyrophoric catalyst (e.g., hydrotreaters and hydrocrackers) and a pure hydrogen supply is not available at the equipment at the time of the startup, shutdown, maintenance, or inspection activity, the LEL of the vapor in the equipment must be less than 20 percent, except for one event per year not to exceed 35 percent.

(v) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in paragraphs (c)(1)(i) through (iv) can be met prior to installing or removing a blind flange or similar equipment blind, the pressure in the equipment served by the maintenance vent is reduced to 2 psig or less. 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.

* * * * *

■ 8. Section 63.644 is amended by:
■ a. Revising paragraph (c) introductory text;
■ b. Removing the period at the end of paragraph (c)(2) and adding "; or" in its place; and
■ c. Adding paragraph (c)(3).

The revision and addition read as follows:

§ 63.644 Monitoring provisions for miscellaneous process vents.

* * * * *

(c) The owner or operator of a Group 1 miscellaneous process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with paragraph (a) of this section either directly to the atmosphere or to a control device that does not comply with the requirements in § 63.643(a) shall comply with either paragraph (c)(1), (2), or (3) of this section. Use of the bypass at any time to divert a Group 1 miscellaneous process vent stream to the atmosphere or to a control device that does not comply with the requirements in § 63.643(a) is an emissions standards violation. Equipment such as low leg drains and equipment subject to § 63.648 are not subject to this paragraph (c).

* * * * *

(3) Use a cap, blind flange, plug, or a second valve for an open-ended valve or line following the requirements specified in § 60.482–6(a)(2), (b) and (c).

* * * * *

■ 9. Section 63.648 is amended by:
■ a. Revising the introductory text of paragraphs (a), (c), and (j); and
■ b. Revising paragraphs (j)(3)(ii)(A) and (E), (j)(3)(iv), (j)(3)(v) introductory text, and (j)(4).

The revisions read as follows:

§ 63.648 Equipment leak standards.

(a) Each owner or operator of an existing source subject to the provisions of this subpart shall comply with the provisions of 40 CFR part 60, subpart VV, and paragraph (b) of this section except as provided in paragraphs (a)(1) through (3), and (c) through (j) of this section. Each owner or operator of a new source subject to the provisions of this subpart shall comply with subpart H of this part except as provided in paragraphs (c) through (j) of this section.

* * * * *

(c) In lieu of complying with the existing source provisions of paragraph (a) in this section, an owner or operator may elect to comply with the requirements of §§ 63.161 through 63.169, 63.171, 63.172, 63.175, 63.176, 63.177, 63.179, and 63.180 except as provided in paragraphs (c)(1) through (12) and (e) through (j) of this section.

* * * * *

(j) Except as specified in paragraph (j)(4) of this section, the owner or operator must comply with the requirements specified in paragraphs (j)(1) and (2) of this section for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of § 60.482–4 or § 63.165, as applicable. Except as specified in paragraphs (j)(4) and (5) of this section, the owner or operator must also comply with the requirements specified in paragraph (j)(3) of this section for all pressure relief devices in organic HAP service.

* * * * *

(3) * * *

(ii) * * *

(A) Flow, temperature, liquid level and pressure indicators with deadman switches, monitors, or automatic actuators. Independent, non-duplicative systems within this category count as separate redundant prevention measures.

* * * * *

(E) Staged relief system where initial pressure relief device (with lower set release pressure) discharges to a flare or other closed vent system and control device.

* * * * *

(iv) The owner or operator shall determine the total number of release events occurred during the calendar year for each affected pressure relief device separately. The owner or operator shall also determine the total number of release events for each pressure relief device for which the root cause analysis concluded that the root cause was a *force majeure* event, as defined in this subpart.

(v) Except for pressure relief devices described in paragraphs (j)(4) and (5) of this section, the following release events from an affected pressure relief device are a violation of the pressure release management work practice standards:

* * * * *

(4) *Pressure relief devices routed to a control device.* (i) If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is not required to comply with paragraph (j)(1), (2), or (3) (if applicable) of this section.

(ii) If a pilot-operated pressure relief device is used and the primary release valve is routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is required to comply only with paragraphs (j)(1) and (2) of this section for the pilot discharge vent and is not required to comply with paragraph (j)(3) of this section for the pilot-operated pressure relief device.

(iii) If a balanced bellows pressure relief device is used and the primary release valve is routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is required to comply only with paragraphs (j)(1) and (2) of this section for the bonnet vent and is not required to comply with paragraph (j)(3) of this section for the balanced bellows pressure relief device.

(iv) Both the closed vent system and control device (if applicable) referenced in paragraphs (j)(4)(i) through (iii) of this section must meet the requirements of § 63.644. When complying with this paragraph (j)(4), all references to ''Group 1 miscellaneous process vent'' in § 63.644 mean ''pressure relief device.''.

(v) If a pressure relief device complying with this paragraph (j)(4) is routed to the fuel gas system, then on and after January 30, 2019, any flares receiving gas from that fuel gas system must be in compliance with § 63.670.

* * * * *

■ 10. Section 63.655 is amended by:

■ a. Revising paragraphs (f)(1)(i)(A)(*1*) through (*3*), (f)(1)(i)(B)(*3*), (f)(1)(i)(C)(*2*), (f)(1)(iii), (f)(2), (f)(4), (g)(2)(i)(B)(*1*) and (g)(10) introductory text;

■ b. Redesignating paragraph (g)(10)(iii) as (g)(10)(iv);

■ c. Adding new paragraph (g)(10)(iii);

■ d. Revising paragraph (g)(13) introductory text and paragraph (h)(2)(ii);

■ e. Removing and reserving paragraph (h)(5)(iii);

■ f. Revising paragraph (h)(8);

■ g. Revising paragraph (h)(9)(i) introductory text and paragraph (h)(9)(ii) introductory text;

■ h. Adding paragraph (h)(10);

■ i. Revising paragraph (i)(3)(ii)(B);

■ j. Adding paragraphs (i)(3)(ii)(C) and (i)(5)(i) through (v);

■ k. Revising paragraphs (i)(7)(iii)(B) and (i)(11) introductory text;

■ l. Adding paragraph (i)(11)(iv);

■ m. Revising paragraph (i)(12) introductory text and paragraph (i)(12)(iv); and

■ n. Adding paragraph (i)(12)(vi).

The revisions and additions read as follows:

§ 63.655 Reporting and recordkeeping requirements.

* * * * *

(f) ***

(1) ***

(i) ***

(A) ***

(*1*) For each Group 1 storage vessel complying with either § 63.646 or § 63.660 that is not included in an emissions average, the method of compliance (*i.e.*, internal floating roof, external floating roof, or closed vent system and control device).

(*2*) For storage vessels subject to the compliance schedule specified in § 63.640(h)(2) that are not complying with § 63.646 or § 63.660 as applicable, the anticipated compliance date.

(*3*) For storage vessels subject to the compliance schedule specified in § 63.640(h)(2) that are complying with § 63.646 or § 63.660, as applicable, and the Group 1 storage vessels described in § 63.640(l), the actual compliance date.

(B) ***

(*3*) If the owner or operator elects to submit the results of a performance test, identification of the storage vessel and control device for which the performance test will be submitted, and identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted. If the performance test is submitted electronically through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with § 63.655(h)(9), 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 in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Notification of Compliance Status is submitted.

(C) ***

(*2*) If a performance test is conducted instead of a design evaluation, results of the performance test demonstrating that the control device achieves greater than or equal to the required control efficiency. A performance test conducted prior to the compliance date of this subpart can be used to comply with this requirement, provided that the test was conducted using EPA methods and that the test conditions are representative of current operating practices. If the performance test is submitted electronically through the EPA's Compliance and Emissions Data Reporting Interface in accordance with § 63.655(h)(9), 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 in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Notification of Compliance Status is submitted.

* * * * *

(iii) For miscellaneous process vents controlled by control devices required to be tested under § 63.645 and § 63.116(c), performance test results including the information in paragraphs (f)(1)(iii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used provided that the test was conducted using the methods specified in § 63.645 and that the test conditions are representative of current operating conditions. If the performance test is submitted electronically through the EPA's Compliance and Emissions Data Reporting Interface in accordance with § 63.655(h)(9), 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 in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Notification of Compliance Status is submitted.

* * * * *

(2) If initial performance tests are required by §§ 63.643 through 63.653, the Notification of Compliance Status report shall include one complete test report for each test method used for a particular source. On and after February 1, 2016, for data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results in accordance with § 63.655(h)(9) by the date that you submit the Notification of Compliance Status, and you must include the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted in the Notification of Compliance Status. All other performance test results must

be reported in the Notification of Compliance Status.

* * * * *

(4) Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status report, unless the results are required to be submitted electronically by § 63.655(h)(9). For performance evaluation results required to be submitted through CEDRI, submit the results in accordance with § 63.655(h)(9) by the date that you submit the Notification of Compliance Status and include the process unit where the CMS is installed, the parameter measured by the CMS, and the date that the performance evaluation was conducted in the Notification of Compliance Status.

* * * * *

(g) * * *

(2) * * *

(i) * * *

(B) * * *

(*1*) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than a 10 percent open area.

* * * * *

(10) For pressure relief devices subject to the requirements § 63.648(j), Periodic Reports must include the information specified in paragraphs (g)(10)(i) through (iv) of this section.

* * * * *

(iii) For pilot-operated pressure relief devices in organic HAP service, report each pressure release to the atmosphere through the pilot vent that equals or exceeds 72 pounds of VOC per day, including duration of the pressure release through the pilot vent and estimate of the mass quantity of each organic HAP released.

* * * * *

(13) For maintenance vents subject to the requirements in § 63.643(c), Periodic Reports must include the information specified in paragraphs (g)(13)(i) through (iv) of this section for any release exceeding the applicable limits in § 63.643(c)(1). For the purposes of this reporting requirement, owners or operators complying with § 63.643(c)(1)(iv) must report each venting event for which the lower explosive limit is 20 percent or greater; owners or operators complying with § 63.643(c)(1)(v) must report each venting event conducted under those provisions and include an explanation for each event as to why utilization of this alternative was required.

* * * * *

(h) * * *

(2) * * *

(ii) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof shall notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by § 63.120(b)(1) or (2) or § 63.1063(d)(3). The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.

* * * * *

(8) For fenceline monitoring systems subject to § 63.658, each owner or operator shall submit the following information to the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) on a quarterly basis. (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The first quarterly report must be submitted once the owner or operator has obtained 12 months of data. The first quarterly report must cover the period beginning on the compliance date that is specified in Table 11 of this subpart and ending on March 31, June 30, September 30 or December 31, whichever date is the first date that occurs after the owner or operator has obtained 12 months of data (*i.e.*, the first quarterly report will contain between 12 and 15 months of data). Each subsequent quarterly report must cover one of the following reporting periods: Quarter 1 from January 1 through March 31; Quarter 2 from April 1 through June 30; Quarter 3 from July 1 through September 30; and Quarter 4 from October 1 through December 31. Each quarterly report must be electronically submitted no later than 45 calendar days following the end of the reporting period.

(i) Facility name and address.

(ii) Year and reporting quarter (*i.e.*, Quarter 1, Quarter 2, Quarter 3, or Quarter 4).

(iii) For the first reporting period and for any reporting period in which a passive monitor is added or moved, for each passive monitor: The latitude and longitude location coordinates; the sampler name; and identification of the type of sampler (*i.e.*, regular monitor, extra monitor, duplicate, field blank, inactive). The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 3 meters. Coordinates shall be in decimal degrees with at least five decimal places.

(iv) The beginning and ending dates for each sampling period.

(v) Individual sample results for benzene reported in units of $\mu g/m^3$ for each monitor for each sampling period that ends during the reporting period. Results below the method detection limit shall be flagged as below the detection limit and reported at the method detection limit.

(vi) Data flags that indicate each monitor that was skipped for the sampling period, if the owner or operator uses an alternative sampling frequency under § 63.658(e)(3).

(vii) Data flags for each outlier determined in accordance with Section 9.2 of Method 325A of appendix A of this part. For each outlier, the owner or operator must submit the individual sample result of the outlier, as well as the evidence used to conclude that the result is an outlier.

(viii) The biweekly concentration difference (Δc) for benzene for each sampling period and the annual average Δc for benzene for each sampling period.

(9) * * *

(i) Unless otherwise specified by this subpart, within 60 days after the date of completing each performance test as required by this subpart, the owner or operator shall submit the results of the performance tests following the procedure specified in either paragraph (h)(9)(i)(A) or (B) of this section.

* * * * *

(ii) Unless otherwise specified by this subpart, within 60 days after the date of completing each CEMS performance evaluation as required by this subpart, the owner or operator must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(9)(ii)(A) or (B) of this section.

* * * * *

(10)(i) If you are required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, you will be or are precluded from accessing CEDRI or CDX

and submitting a required report within the time prescribed, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description identifying the date(s) and time(s) the CDX or CEDRI were unavailable when you attempted to access it in the 5 business days prior to the submission deadline; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(ii) If you are required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of this paragraph, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage). If you intend to assert a claim of force majeure, you must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(i) * * *

(3) * * *

(ii) * * *

(B) 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; or

(C) All values that meet the set criteria for variation from previously recorded values using an automated data compression recording system.

(*1*) The automated data compression recording system shall be designed to:

(*i*) Measure the operating parameter value at least once every hour.

(*ii*) Record at least 24 values each day during periods of operation.

(*iii*) Record the date and time when monitors are turned off or on.

(*iv*) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(*v*) Compute daily average values of the monitored operating parameter based on recorded data.

(*2*) You must maintain a record of the description of the monitoring system and data compression recording system including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria of paragraph (i)(3)(ii)(C)(*1*) of this section.

* * * * * *

(5) * * *

(i) Identification of all petroleum refinery process unit heat exchangers at the facility and the average annual HAP concentration of process fluid or intervening cooling fluid estimated when developing the Notification of Compliance Status report.

(ii) Identification of all heat exchange systems subject to the monitoring requirements in § 63.654 and identification of all heat exchange systems that are exempt from the monitoring requirements according to the provisions in § 63.654(b). For each heat exchange system that is subject to the monitoring requirements in § 63.654, this must include identification of all heat exchangers within each heat exchange system; and, for closed-loop recirculation systems, the cooling tower included in each heat exchange system.

(iii) Results of the following monitoring data for each required monitoring event:

(A) Date/time of event.

(B) Barometric pressure.

(C) El Paso air stripping apparatus water flow milliliter/minute (ml/min) and air flow, ml/min, and air temperature, °Celsius.

(D) FID reading (ppmv).

(E) Length of sampling period.

(F) Sample volume.

(G) Calibration information identified in Section 5.4.2 of the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see § 63.14).

(iv) The date when a leak was identified, the date the source of the leak was identified, and the date when the heat exchanger was repaired or taken out of service.

(v) If a repair is delayed, the reason for the delay, the schedule for completing the repair, the heat exchange exit line flow or cooling tower return line average flow rate at the monitoring location (in gallons/minute), and the estimate of potential strippable hydrocarbon emissions for each required monitoring interval during the delay of repair.

* * * * * *

(7) * * *

(iii) * * *

(B) The pressure or temperature of the coke drum vessel, as applicable, for the 5-minute period prior to the pre-vent draining.

* * * * * *

(11) For each pressure relief device subject to the pressure release management work practice standards in § 63.648(j)(3), the owner or operator shall keep the records specified in paragraphs (i)(11)(i) through (iii) of this section. For each pilot-operated pressure relief device subject to the

requirements at § 63.648(j)(4)(ii) or (iii), the owner or operator shall keep the records specified in paragraph (i)(11)(iv) of this section.

* * * * *

(iv) For pilot-operated pressure relief devices, general or release-specific records for estimating the quantity of VOC released from the pilot vent during a release event, and records of calculations used to determine the quantity of specific HAP released for any event or series of events in which 72 or more pounds of VOC are released in a day.

(12) For each maintenance vent opening subject to the requirements in § 63.643(c), the owner or operator shall keep the applicable records specified in paragraphs (i)(12)(i) through (vi) of this section.

* * * * *

(iv) If complying with the requirements of § 63.643(c)(1)(iii), records used to estimate the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 72 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening for which the deinventory procedures specified in paragraph (i)(12)(i) 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, identification of 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.

* * * * *

(vi) If complying with the requirements of § 63.643(c)(1)(v), 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.

* * * * *

■ 11. Section 63.657 is amended by revising paragraphs (a)(1)(i) and (ii), (a)(2)(i) and (ii), (b)(5), and (c) to read as follows:

§ 63.657 Delayed coking unit decoking operation standards.

(a) ***

(1) ***

(i) An average vessel pressure of 2 psig or less determined on a rolling 60-event average; or

(ii) An average vessel temperature of 220 degrees Fahrenheit or less determined on a rolling 60-event average.

(2) ***

(i) A vessel pressure of 2.0 psig or less for each decoking event; or

(ii) A vessel temperature of 218 degrees Fahrenheit or less for each decoking event.

* * * * *

(b) ***

(5) The output of the pressure monitoring system must be reviewed each day the unit is operated to ensure that the pressure readings fluctuate as expected between operating and cooling/decoking cycles to verify the pressure taps are not plugged. Plugged pressure taps must be unplugged or otherwise repaired prior to the next operating cycle.

* * * * *

(c) The owner or operator of a delayed coking unit using the ''water overflow'' method of coke cooling prior to complying with the applicable requirements in paragraph (a) of this section must meet the requirements in either paragraph (c)(1) or (c)(2) of this section or, if applicable, the requirements in paragraph (c)(3) of this section. The owner or operator of a delayed coking unit using the ''water overflow'' method of coke cooling subject to this paragraph shall determine the coke drum vessel temperature as specified in paragraphs (c) and (d) of this section and shall not otherwise drain or vent the coke drum until the coke drum vessel temperature is at or below the applicable limits in paragraph (a)(1)(ii) or (a)(2)(ii) of this section.

(1) The overflow water must be directed to a separator or similar disengaging device that is operated in a manner to prevent entrainment of gases from the coke drum vessel to the overflow water storage tank. Gases from the separator or disengaging device must be routed to a closed blowdown system or otherwise controlled following the requirements for a Group 1 miscellaneous process vent. The liquid from the separator or disengaging device must be hardpiped to the overflow water storage tank or similarly transported to prevent exposure of the overflow water to the atmosphere. The overflow water storage tank may be an open or uncontrolled fixed-roof tank provided that a submerged fill pipe (pipe outlet below existing liquid level in the tank) is used to transfer overflow water to the tank.

(2) The overflow water must be directed to a storage vessel meeting the requirements for storage vessels in subpart SS of this part.

(3) Prior to November 26, 2020, if the equipment needed to comply with paragraphs (c)(1) or (2) of this section are not installed and operational, you must comply with all of the requirements in paragraphs (c)(3)(i) through (iv) of this section.

(i) The temperature of the coke drum, measured according to paragraph (c) of this section, must be 250 degrees Fahrenheit or less prior to initiation of water overflow and at all times during the water overflow.

(ii) The overflow water must be hardpiped to the overflow water storage tank or similarly transported to prevent exposure of the overflow water to the atmosphere.

(iii) The overflow water storage tank may be an open or uncontrolled fixed-roof tank provided that all of the following requirements are met.

(A) A submerged fill pipe (pipe outlet below existing liquid level in the tank) is used to transfer overflow water to the tank.

(B) The liquid level in the storage tank is at least 6 feet above the submerged fill pipe outlet at all times during water overflow.

(C) The temperature of the contents in the storage tank remain below 150 degrees Fahrenheit at all times during water overflow.

* * * * *

■ 12. Section 63.658 is amended by revising paragraphs (c)(1), (2) and (3), (d)(1) introductory text and (d)(2), (e) introductory text, (e)(3)(iv), (f)(1)(i) introductory text, and (f)(1)(i)(B) to read as follows:

§ 63.658 Fenceline monitoring provisions.

* * * * *

(c) ***

(1) As it pertains to this subpart, known sources of VOCs, as used in Section 8.2.1.3 in Method 325A of appendix A of this part for siting passive monitors, means a wastewater

treatment unit, process unit, or any emission source requiring control according to the requirements of this subpart, including marine vessel loading operations. For marine vessel loading operations, one passive monitor should be sited on the shoreline adjacent to the dock. For this subpart, an additional monitor is not required if the only emission sources within 50 meters of the monitoring boundary are equipment leak sources satisfying all of the conditions in paragraphs (c)(1)(i) through (iv) of this section.

(i) The equipment leak sources in organic HAP service within 50 meters of the monitoring boundary are limited to valves, pumps, connectors, sampling connections, and open-ended lines. If compressors, pressure relief devices, or agitators in organic HAP service are present within 50 meters of the monitoring boundary, the additional passive monitoring location specified in Section 8.2.1.3 in Method 325A of appendix A of this part must be used.

(ii) All equipment leak sources in gas or light liquid service (and in organic HAP service), including valves, pumps, connectors, sampling connections and open-ended lines, must be monitored using EPA Method 21 of 40 CFR part 60, appendix A–7 no less frequently than quarterly with no provisions for skip period monitoring, or according to the provisions of § 63.11(c) Alternative Work practice for monitoring equipment for leaks. For the purpose of this provision, a leak is detected if the instrument reading equals or exceeds the applicable limits in paragraphs (c)(1)(ii)(A) through (E) of this section:

(A) For valves, pumps or connectors at an existing source, an instrument reading of 10,000 ppmv.

(B) For valves or connectors at a new source, an instrument reading of 500 ppmv.

(C) For pumps at a new source, an instrument reading of 2,000 ppmv.

(D) For sampling connections or open-ended lines, an instrument reading of 500 ppmv above background.

(E) For equipment monitored according to the Alternative Work practice for monitoring equipment for leaks, the leak definitions contained in § 63.11 (c)(6)(i) through (iii).

(iii) All equipment leak sources in organic HAP service, including sources in gas, light liquid and heavy liquid service, must be inspected using visual, audible, olfactory, or any other detection method at least monthly. A leak is detected if the inspection identifies a potential leak to the atmosphere or if there are indications of liquids dripping.

(iv) All leaks identified by the monitoring or inspections specified in paragraphs (c)(1)(ii) or (iii) of this section must be repaired no later than 15 calendar days after it is detected with no provisions for delay of repair. If a repair is not completed within 15 calendar days, the additional passive monitor specified in Section 8.2.1.3 in Method 325A of appendix A of this part must be used.

(2) The owner or operator may collect one or more background samples if the owner or operator believes that an offsite upwind source or an onsite source excluded under § 63.640(g) may influence the sampler measurements. If the owner or operator elects to collect one or more background samples, the owner or operator must develop and submit a site-specific monitoring plan for approval according to the requirements in paragraph (i) of this section. Upon approval of the site-specific monitoring plan, the background sampler(s) should be operated co-currently with the routine samplers.

(3) If there are 19 or fewer monitoring locations, the owner or operator shall collect at least one co-located duplicate sample per sampling period and at least one field blank per sampling period. If there are 20 or more monitoring locations, the owner or operator shall collect at least two co-located duplicate samples per sampling period and at least one field blank per sampling period. The co-located duplicates may be collected at any of the perimeter sampling locations.

* * * * * *

(d) * * *

(1) If a near-field source correction is used as provided in paragraph (i)(2) of this section or if an alternative test method is used that provides time-resolved measurements, the owner or operator shall:

* * * * * *

(2) For cases other than those specified in paragraph (d)(1) of this section, the owner or operator shall collect and record sampling period average temperature and barometric pressure using either an on-site meteorological station in accordance with Section 8.3.1 through 8.3.3 of Method 325A of appendix A of this part or, alternatively, using data from a United States Weather Service (USWS) meteorological station provided the USWS meteorological station is within 40 kilometers (25 miles) of the refinery.

* * * * * *

(e) The owner or operator shall use a sampling period and sampling frequency as specified in paragraphs (c)(1) through (3) of this section.

* * * * * *

(3) * * * * *

(iv) If every sample at a monitoring site that is monitored at the frequency specified in paragraph (c)(3)(iii) of this section is at or below 0.9 μg/m³ for 2 years (*i.e.*, 4 consecutive semiannual samples), only one sample per year is required for that monitoring site. For yearly sampling, samples shall occur at least 10 months but no more than 14 months apart.

* * * * * *

(f) * * * * *

(1) * * * * *

(i) Except when near-field source correction is used as provided in paragraph (i) of this section, the owner or operator shall determine the highest and lowest sample results for benzene concentrations from the sample pool and calculate Δc as the difference in these concentrations. Co-located samples must be averaged together for the purposes of determining the benzene concentration for that sampling location, and, if applicable, for determining Δc. The owner or operator shall adhere to the following procedures when one or more samples for the sampling period are below the method detection limit for benzene:

* * * * * *

(B) If all sample results are below the method detection limit, the owner or operator shall use the method detection limit as the highest sample result and zero as the lowest sample result when calculating Δc.

* * * * * *

■ 13. Section 63.660 is amended by revising the introductory text, paragraph (b) introductory text, paragraphs (b)(1) and (c), and paragraph (i)(2) introductory text, and adding paragraph (i)(2)(iii) to read as follows:

§ 63.660 Storage vessel provisions.

On and after the applicable compliance date for a Group 1 storage vessel located at a new or existing source as specified in § 63.640(h), the owner or operator of a Group 1 storage vessel storing liquid with a maximum true vapor pressure less than 76.6 kilopascals (11.1 pounds per square inch) that is part of a new or existing source shall comply with either the requirements in subpart WW or SS of this part according to the requirements in paragraphs (a) through (i) of this section and the owner or operator of a Group 1 storage vessel storing liquid with a maximum true vapor pressure greater than or equal to 76.6 kilopascals (11.1 pounds per square inch) that is

part of a new or existing source shall comply with the requirements in subpart SS of this part according to the requirements in paragraphs (a) through (i) of this section.

* * * * *

(b) A floating roof storage vessel complying with the requirements of subpart WW of this part may comply with the control option specified in paragraph (b)(1) of this section and, if equipped with a ladder having at least one slotted leg, shall comply with one of the control options as described in paragraph (b)(2) of this section. If the floating roof storage vessel does not meet the requirements of § 63.1063(a)(2)(i) through (a)(2)(viii) as of June 30, 2014, these requirements do not apply until the next time the vessel is completely emptied and degassed, or January 30, 2026, whichever occurs first.

(1) In addition to the options presented in §§ 63.1063(a)(2)(viii)(A) and (B) and 63.1064, a floating roof storage vessel may comply with § 63.1063(a)(2)(viii) using a flexible enclosure device and either a gasketed or welded cap on the top of the guidepole.

* * * * *

(c) For storage vessels previously subject to requirements in § 63.646, initial inspection requirements in § 63.1063(c)(1) and (c)(2)(i) (*i.e.*, those related to the initial filling of the storage vessel) or in § 63.983(b)(1)(i)(A), as applicable, are not required. Failure to perform other inspections and monitoring required by this section shall constitute a violation of the applicable standard of this subpart.

* * * * *

(i) * * *

(2) If a closed vent system contains a bypass line, the owner or operator shall comply with the provisions of either § 63.983(a)(3)(i) or (ii) or paragraph (iii) of this section for each closed vent system that contains bypass lines that could divert a vent stream either directly to the atmosphere or to a control device that does not comply with the requirements in subpart SS of this part. Except as provided in paragraphs (i)(2)(i) and (ii) of this section, use of the bypass at any time to divert a Group 1 storage vessel either directly to the atmosphere or to a control device that does not comply with the requirements in subpart SS of this part is an emissions standards violation. Equipment such as low leg drains and equipment subject to § 63.648 are not subject to this paragraph (i)(2).

* * * * *

(iii) Use a cap, blind flange, plug, or a second valve for an open-ended valves or line following the requirements specified in § 60.482–6(a)(2), (b) and (c).

* * * * *

■ 14. Section 63.670 is amended by:
■ a. Revising paragraph (f);
■ b. Revising paragraphs (h) introductory text, (h)(1), and (i) introductory text;
■ c. Adding paragraphs (i)(5) and (6);
■ d. Revising paragraph (j)(6) introductory text;
■ e. Revising the definition of the Q_{cum} term in the equation in paragraph (k)(3);
■ f. Revising paragraph (m)(2) introductory text;
■ g. Revising the definitions of the Q_{NG2}, Q_{NG1}, and NHV_{NG} terms in the equation in paragraph (m)(2);
■ h. Revising paragraph (n)(2) introductory text;
■ i. Revising the definitions of the Q_{NG2}, Q_{NG1}, and NHV_{NG} terms in the equation in paragraph (n)(2); and
■ j. Revising paragraphs (o) introductory text, (o)(1)(ii)(B), (o)(1)(iii)(B), and (o)(3)(i).

The revisions and additions read as follows:

§ 63.670 Requirements for flare control devices.

* * * * *

(f) *Dilution operating limits for flares with perimeter assist air.* Except as provided in paragraph (f)(1) of this section, for each flare actively receiving perimeter assist air, the owner or operator shall operate the flare to maintain the net heating value dilution parameter (NHVdil) at or above 22 British thermal units per square foot (Btu/ft^2) determined on a 15-minute block period basis when regulated material is being routed to the flare for at least 15-minutes. The owner or operator shall monitor and calculate NHV_{dil} as specified in paragraph (n) of this section.

(1) If the only assist air provided to a specific flare is perimeter assist air intentionally entrained in lower and/or upper steam at the flare tip and the effective diameter is 9 inches or greater, the owner or operator shall comply only with the NHV_{cz} operating limit in paragraph (e) of this section for that flare.

(2) [Reserved]

* * * * *

(h) *Visible emissions monitoring.* The owner or operator shall conduct an initial visible emissions demonstration using an observation period of 2 hours using Method 22 at 40 CFR part 60, appendix A–7. The initial visible emissions demonstration should be conducted the first time regulated materials are routed to the flare. Subsequent visible emissions observations must be conducted using either the methods in paragraph (h)(1) of this section or, alternatively, the methods in paragraph (h)(2) of this section. The owner or operator must record and report any instances where visible emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in § 63.655(g)(11)(ii).

(1) At least once per day for each day regulated material is routed to the flare, conduct visible emissions observations using an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A–7. If at any time the owner or operator sees visible emissions while regulated material is routed to the flare, even if the minimum required daily visible emission monitoring has already been performed, the owner or operator shall immediately begin an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A–7. If visible emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 at 40 CFR part 60, appendix A–7 must be extended to 2 hours or until 5 minutes of visible emissions are observed. Daily 5-minute Method 22 observations are not required to be conducted for days the flare does not receive any regulated material.

* * * * *

(i) *Flare vent gas, steam assist and air assist flow rate monitoring.* The owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate in the flare header or headers that feed the flare as well as any flare supplemental gas used. Different flow monitoring methods may be used to measure different gaseous streams that make up the flare vent gas provided that the flow rates of all gas streams that contribute to the flare vent gas are determined. If assist air or assist steam is used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of assist air and/or assist steam used with the flare. If pre-mix assist air and perimeter assist are both used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of separately measuring, calculating, and recording the volumetric flow rate of premix assist air and perimeter assist air used with the

flare. Flow monitoring system requirements and acceptable alternatives are provided in paragraphs (i)(1) through (6) of this section.

* * * * *

(5) Continuously monitoring fan speed or power and using fan curves is an acceptable method for continuously monitoring assist air flow rates.

(6) For perimeter assist air intentionally entrained in lower and/or upper steam, the monitored steam flow rate and the maximum design air-to-steam volumetric flow ratio of the entrainment system may be used to determine the assist air flow rate.

(j) * * *

(6) Direct compositional or net heating value monitoring is not required for gas streams that have been demonstrated to have consistent composition (or a fixed minimum net heating value) according to the methods in paragraphs (j)(6)(i) through (iii) of this section.

* * * * *

(k) * * *

(3) * * *

* * * * *

Q_{cum} = Cumulative volumetric flow over 15-minute block average period, standard cubic feet.

* * * * *

(m) * * *

(2) Owners or operators of flares that use the feed-forward calculation methodology in paragraph (l)(5)(i) of this section and that monitor gas composition or net heating value in a location representative of the cumulative vent gas stream and that directly monitor flare supplemental gas flow additions to the flare must determine the 15-minute block average NHV_{cz} using the following equation:

* * * * *

Q_{NG2} = Cumulative volumetric flow of flare supplemental gas during the 15-minute block period, scf.

Q_{NG1} = Cumulative volumetric flow of flare supplemental gas during the previous 15-minute block period, scf. For the first 15-minute block period of an event, use the volumetric flow value for the current 15-minute block period, i.e., $Q_{NG1} = Q_{NG2}$.

NHV_{NG} = Net heating value of flare supplemental gas for the 15-minute block period determined according to the requirements in paragraph (j)(5) of this section, Btu/scf.

* * * * *

(n) * * *

(2) Owners or operators of flares that use the feed-forward calculation methodology in paragraph (l)(5)(i) of this section and that monitor gas composition or net heating value in a location representative of the cumulative vent gas stream and that directly monitor flare supplemental gas flow additions to the flare must determine the 15-minute block average NHV_{dil} using the following equation only during periods when perimeter assist air is used. For 15-minute block periods when there is no cumulative volumetric flow of perimeter assist air, the 15-minute block average NHV_{dil} parameter does not need to be calculated.

* * * * *

Q_{NG2} = Cumulative volumetric flow of flare supplemental gas during the 15-minute block period, scf.

Q_{NG1} = Cumulative volumetric flow of flare supplemental gas during the previous 15-minute block period, scf. For the first 15-minute block period of an event, use the volumetric flow value for the current 15-minute block period, *i.e.*, $Q_{NG1} = Q_{NG2}$.

NHV_{NG} = Net heating value of flare supplemental gas for the 15-minute block period determined according to the requirements in paragraph (j)(5) of this section, Btu/scf.

* * * * *

(o) *Emergency flaring provisions.* The owner or operator of a flare that has the potential to operate above its smokeless capacity under any circumstance shall comply with the provisions in paragraphs (o)(1) through (7) of this section.

(1) * * *

(ii) * * *

(B) Implementation of prevention measures listed for pressure relief devices in § 63.648(j)(3)(ii)(A) through (E) for each pressure relief device that can discharge to the flare.

* * * * *

(iii) * * *

(B) The smokeless capacity of the flare based on a 15-minute block average and design conditions. *Note:* A single value must be provided for the smokeless capacity of the flare.

* * * * *

(3) * * *

(i) The vent gas flow rate exceeds the smokeless capacity of the flare based on a 15-minute block average and visible emissions are present from the flare for more than 5 minutes during any 2 consecutive hours during the release event.

* * * * *

■ 15. Table 6 to Subpart CC is amended by revising the entries "63.6(f)(3)", "63.6(h)(8)", 63.7(a)(2)", "63.7(f)", "63.7(h)(3)", and "63.8(c)" to read as follows:

TABLE 6—GENERAL PROVISIONS APPLICABILITY TO SUBPART CC[a]

Reference	Applies to subpart CC	Comment
*	*	*
63.6(f)(3)	Yes	Except the cross-references to § 63.6(f)(1) and (e)(1)(i) are changed to § 63.642(n) and performance test results may be written or electronic.
*	*	*
63.6(h)(8)	Yes	Except performance test results may be written or electronic.
*	*	*
63.7(a)(2)	Yes	Except test results must be submitted in the Notification of Compliance Status report due 150 days after compliance date, as specified in § 63.655(f), unless they are required to be submitted electronically in accordance with § 63.655(h)(9). Test results required to be submitted electronically must be submitted by the date the Notification of Compliance Status report is submitted.
*	*	*
63.7(f)	Yes	Except that additional notification or approval is not required for alternatives directly specified in Subpart CC.

TABLE 6—GENERAL PROVISIONS APPLICABILITY TO SUBPART CC[a]—Continued

Reference	Applies to subpart CC	Comment
*	*	*
63.7(h)(3)	Yes	Yes, except site-specific test plans shall not be required, and where §63.7(h)(3)(i) specifies waiver submittal date, the date shall be 90 days prior to the Notification of Compliance Status report in §63.655(f).
*	*	*
63.8(e)	Yes	Except that results are to be submitted electronically if required by §63.655(h)(9).
*	*	*

■ 16. Table 11 to subpart CC is amended by revising items (2)(iv), (3)(iv) and (4)(v) to read as follows:

TABLE 11—COMPLIANCE DATES AND REQUIREMENTS

If the construction/reconstruction date is	Then the owner or operator must comply with	And the owner or operator must achieve compliance	Except as provided in
*	*	*	*
(2) * * *	(iv) Requirements for existing sources in §63.643(c).	On or before December 26, 2018	§§63.640(k), (l) and (m) and 63.643(d).
*	*	*	*
(3) * * *	(iv) Requirements for existing sources in §63.643(c).	On or before December 26, 2018	§§63.640(k), (l) and (m) and 63.643(d).
*	*	*	*
(4) * * *	(v) Requirements for existing sources in §63.643(c).	On or before December 26, 2018	§§63.640(k), (l) and (m) and 63.643(d).
*	*	*	*

■ 17. Table 13 to Subpart CC is amended by revising the entry "Hydrogen analyzer" to read as follows:

TABLE 13—CALIBRATION AND QUALITY CONTROL REQUIREMENTS FOR CPMS

Parameter	Minimum accuracy requirements	Calibration requirements
*	*	*
Hydrogen analyzer	±2 percent over the concentration measured or 0.1 volume percent, whichever is greater.	Specify calibration requirements in your site specific CPMS monitoring plan. Calibration requirements should follow manufacturer's recommendations at a minimum. Where feasible, select the sampling location at least two equivalent duct diameters from the nearest control device, point of pollutant generation, air in-leakages, or other point at which a change in the pollutant concentration occurs.

Subpart UUU—National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units

■ 18. Section 63.1564 is amended by revising the introductory text of paragraphs (b)(4)(iii), (c)(3), and (c)(4) and revising paragraph (c)(5)(iii) to read as follows:

§63.1564 What are my requirements for metal HAP emissions from catalytic cracking units?

* * * * *

(b) * * *

(4) * * *

(iii) If you elect Option 3 in paragraph (a)(1)(v) of this section, the Ni lb/hr emission limit, compute your Ni emission rate using Equation 5 of this section and your site-specific Ni operating limit (if you use a continuous opacity monitoring system) using Equations 6 and 7 of this section as follows:

* * * * *

(c) * * *

(3) If you use a continuous opacity monitoring system and elect to comply with Option 3 in paragraph (a)(1)(v) of this section, determine continuous compliance with your site-specific Ni

operating limit by using Equation 11 of this section as follows:

* * * * *

(4) If you use a continuous opacity monitoring system and elect to comply with Option 4 in paragraph (a)(1)(vi) of this section, determine continuous compliance with your site-specific Ni operating limit by using Equation 12 of this section as follows:

* * * * *

(5) * * *

(iii) Calculating the inlet velocity to the primary internal cyclones in feet per second (ft/sec) by dividing the average volumetric flow rate (acfm) by the cumulative cross-sectional area of the primary internal cyclone inlets (ft^2) and by 60 seconds/minute (for unit conversion).

* * * * *

■ 19. Section 63.1565 is amended by revising paragraph (a)(5)(ii) to read as follows:

§ 63.1565 What are my requirements for organic HAP emissions from catalytic cracking units?

(a) * * *

(5) * * *

(ii) You can elect to maintain the oxygen (O_2) concentration in the exhaust gas from your catalyst regenerator at or above 1 volume percent (dry basis) or 1 volume percent (wet basis with no moisture correction).

* * * * *

■ 20. Section 63.1569 is amended by revising paragraph (c)(2) to read as follows:

§ 63.1569 What are my requirements for HAP emissions from bypass lines?

* * * * *

(c) * * *

(2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by complying with the procedures in your operation, maintenance, and monitoring plan.

■ 21. Section 63.1571 is amended by revising the introductory text of paragraphs (a), (a)(5) and (a)(6), and by revising the introductory text of paragraphs (d)(1) and (d)(2) to read as follows:

§ 63.1571 How and when do I conduct a performance test or other initial compliance demonstration?

(a) *When must I conduct a performance test?* You must conduct initial performance tests and report the results by no later than 150 days after the compliance date specified for your source in § 63.1563 and according to the provisions in § 63.7(a)(2) and § 63.1574(a)(3). If you are required to do a performance evaluation or test for a semi-regenerative catalytic reforming unit catalyst regenerator vent, you may do them at the first regeneration cycle after your compliance date and report the results in a follow-up Notification of Compliance Status report due no later than 150 days after the test. You must conduct additional performance tests as specified in paragraphs (a)(5) and (6) of this section and report the results of these performance tests according to the provisions in § 63.1575(f).

* * * * *

(5) *Periodic performance testing for PM or Ni.* Except as provided in paragraphs (a)(5)(i) and (ii) of this section, conduct a periodic performance test for PM or Ni for each catalytic cracking unit at least once every 5 years according to the requirements in Table 4 of this subpart. You must conduct the first periodic performance test no later than August 1, 2017 or within 150 days of startup of a new unit.

* * * * *

(6) *One-time performance testing for Hydrogen Cyanide (HCN).* Conduct a performance test for HCN from each catalytic cracking unit no later than August 1, 2017 or within 150 days of startup of a new unit according to the applicable requirements in paragraphs (a)(6)(i) and (ii) of this section.

* * * * *

(d) * * *

(1) If you must meet the HAP metal emission limitations in § 63.1564, you elect the option in paragraph (a)(1)(v) in § 63.1564 (Ni lb/hr), and you use continuous parameter monitoring systems, you must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. Section 63.1564(b)(2) allows you to adjust the laboratory measurements of the equilibrium catalyst Ni concentration to the maximum level. You must make this adjustment using Equation 1 of this section as follows:

* * * * *

(2) If you must meet the HAP metal emission limitations in § 63.1564, you elect the option in paragraph (a)(1)(vi) in § 63.1564 (Ni per coke burn-off), and you use continuous parameter monitoring systems, you must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. Section 63.1564(b)(2) allows you to adjust the laboratory measurements of the equilibrium catalyst Ni concentration to the maximum level. You must make this adjustment using Equation 2 of this section as follows:

* * * * *

■ 22. Section 63.1572 is amended by revising paragraphs (c)(1) and (d)(1) to read as follows:

§ 63.1572 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(c) * * *

(1) You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart. You must also meet the equipment specifications in Table 41 of this subpart if pH strips or colorimetric tube sampling systems are used. You must meet the requirements in Table 41 of this subpart for BLD systems. Alternatively, before August 1, 2017, you may install, operate, and maintain each continuous parameter monitoring system in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately.

* * * * *

(d) * * *

(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.

* * * * *

■ 23. Section 63.1573 is amended by revising paragraph (a)(1) introductory text to read as follows:

§ 63.1573 What are my monitoring alternatives?

(a) * * * (1) You may use this alternative to a continuous parameter monitoring system for the catalytic regenerator exhaust gas flow rate for your catalytic cracking unit if the unit does not introduce any other gas streams into the catalyst regeneration vent (*i.e.*, complete combustion units with no additional combustion devices). You may also use this alternative to a continuous parameter monitoring system for the catalytic regenerator atmospheric exhaust gas flow rate for your catalytic reforming unit during the coke burn and rejuvenation cycles if the unit operates as a constant pressure system during these cycles. You may

also use this alternative to a continuous parameter monitoring system for the gas flow rate exiting the catalyst regenerator to determine inlet velocity to the primary internal cyclones as required in § 63.1564(c)(5) regardless of the configuration of the catalytic regenerator exhaust vent downstream of the regenerator (*i.e.*, regardless of whether or not any other gas streams are introduced into the catalyst regeneration vent). Except, if you only use this alternative to demonstrate compliance with § 63.1564(c)(5), you shall use this procedure for the performance test and for monitoring after the performance test. You shall:

* * * * *

■ 24. Section 63.1574 is amended by revising paragraph (a)(3)(ii) to read as follows:

§ 63.1574 What notifications must I submit and when?

(a) * * *

(3) * * *

(ii) For each initial compliance demonstration that includes a performance test, you must submit the notification of compliance status no later than 150 calendar days after the compliance date specified for your affected source in § 63.1563. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results in accordance with § 63.1575(k)(1)(i) by the date that you submit the Notification of Compliance Status, and you must include the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted in the Notification of Compliance Status. For performance evaluations of continuous monitoring systems (CMS) measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, you must submit the results in accordance with § 63.1575(k)(2)(i) by the date that you submit the Notification of Compliance Status, and you must include the process unit where the CMS is installed, the parameter measured by the CMS, and the date that the performance evaluation was conducted in the Notification of Compliance Status. All other performance test and performance evaluation results (*i.e.*, those not supported by EPA's ERT) must be reported in the Notification of Compliance Status.

* * * * *

■ 25. Section 63.1575 is amended by:

■ a. Revising paragraphs (f)(1), (k)(1) introductory text and (k)(2) introductory text; and

■ b. Adding paragraph (l).

The revisions and additions read as follows:

§ 63.1575 What reports must I submit and when?

* * * * *

(f) * * *

(1) A copy of any performance test or performance evaluation of a CMS done during the reporting period on any affected unit, if applicable. The report must be included in the next semiannual compliance report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, you must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; 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; 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. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results in accordance with paragraph (k)(1)(i) of this section by the date that you submit the compliance report, and instead of including a copy of the test report in the compliance report, you must include the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted in the compliance report. For performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, you must submit the results in accordance with paragraph (k)(2)(i) of this section by the date that you submit the compliance report, and you must include the process unit where the CMS is installed, the parameter measured by the CMS, and the date that the performance evaluation was conducted in the compliance report. All other performance test and performance evaluation results (*i.e.*, those not supported by EPA's ERT) must be reported in the compliance report.

* * * * *

(k) * * *

(1) Unless otherwise specified by this subpart, within 60 days after the date of completing each performance test as required by this subpart, you must submit the results of the performance tests following the procedure specified in either paragraph (k)(1)(i) or (ii) of this section.

* * * * *

(2) Unless otherwise specified by this subpart, within 60 days after the date of completing each CEMS performance evaluation required by § 63.1571(a) and (b), you must submit the results of the performance evaluation following the procedure specified in either paragraph (k)(2)(i) or (ii) of this section.

* * * * *

(l) *Extensions to electronic reporting deadlines.* (1) If you are required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, you will be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description identifying the date(s) and time(s) the CDX or CEDRI were unavailable when you attempted to access it in the 5 business days prior to the submission deadline; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. The decision to accept the

claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(2) If you are required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage). If you intend to assert a claim of force majeure, you must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

■ 26. Section 63.1576 is amended by revising paragraph (a)(2)(i) to read as follows:

§ 63.1576 What records must I keep, in what form, and for how long?

(a) * * *

(2) * * *

(i) Record the date, time, and duration of each startup and/or shutdown period for which the facility elected to comply with the alternative standards in § 63.1564(a)(5)(ii) or § 63.1565(a)(5)(ii) or § 63.1568(a)(4)(ii) or (iii).

* * * * *

■ 27. Table 3 to Subpart UUU is amended by revising the table heading and entries for items 2.c, 6, 7, 8 and 9 to read as follows:

TABLE 3 TO SUBPART UUU OF PART 63—CONTINUOUS MONITORING SYSTEMS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

For each new or existing catalytic cracking unit	If you use this type of control device for your vent	You shall install, operate, and maintain a
* * * * * * *		
2. * * *		
	c. Wet scrubber	Continuous parameter monitoring system to measure and record the pressure drop across the scrubber,[2] the gas flow rate entering or exiting the control device,[1] and total liquid (or scrubbing liquor) flow rate to the control device.
* * * * * * *		
6. Option 1a: Elect NSPS subpart J, PM per coke burn-off limit, not subject to the NSPS for PM in 40 CFR 60.102 or 60.102a(b)(1).	Any	See item 1 of this table.
7. Option 1b: Elect NSPS subpart Ja, PM per coke burn-off limit, not subject to the NSPS for PM in 40 CFR 60.102 or 60.102a(b)(1).	Any	The applicable continuous monitoring systems in item 2 of this table.
8. Option 1c: Elect NSPS subpart Ja, PM concentration limit not subject to the NSPS for PM in 40 CFR 60.102 or 60.102a(b)(1).	Any	See item 3 of this table.
9. Option 2: PM per coke burn-off limit, not subject to the NSPS for PM in 40 CFR 60.102 or 60.102a(b)(1).	Any	The applicable continuous monitoring systems in item 2 of this table.
* * * * * * *		

[1] If applicable, you can use the alternative in § 63.1573(a)(1) instead of a continuous parameter monitoring system for gas flow rate.

[2] If you use a jet ejector type wet scrubber or other type of wet scrubber equipped with atomizing spray nozzles, you can use the alternative in § 63.1573(b) instead of a continuous parameter monitoring system for pressure drop across the scrubber.

■ 28. Table 4 to Subpart UUU of Part 63 is amended by revising the entries for items 9.c and 10.c to read as follows:

* * * * * * *

TABLE 4 TO SUBPART UUU OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

For each new or existing catalytic cracking unit catalyst regenerator vent	You must	Using	According to these requirements
* * * * * * *			
9. * * *	c. Determine the equilibrium catalyst Ni concentration.	XRF procedure in appendix A to this subpart 1; or EPA Method 6010B or 6020 or EPA Method 7520 or 7521 in SW–8462; or an alternative to the SW–846 method satisfactory to the Administrator.	You must obtain 1 sample for each of the 3 test runs; determine and record the equilibrium catalyst Ni concentration for each of the 3 samples; and you may adjust the laboratory results to the maximum value using Equation 1 of §63.1571, if applicable.
* * * * * * *			
10. * * *	c. Determine the equilibrium catalyst Ni concentration.	See item 9.c. of this table	You must obtain 1 sample for each of the 3 test runs; determine and record the equilibrium catalyst Ni concentration for each of the 3 samples; and you may adjust the laboratory results to the maximum value using Equation 2 of §63.1571, if applicable.
* * * * * * *			

* * * * *

■ 29. Table 5 to Subpart UUU is amended by revising the entry for item 3 to read as follows:

TABLE 5 TO SUBPART UUU OF PART 63—INITIAL COMPLIANCE WITH METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

For each new and existing catalytic cracking unit	For the following emission limit	You have demonstrated compliance if
* * * * * * *		
3. Subject to NSPS for PM in 40 CFR 60.102a(b)(1)(ii), electing to meet the PM per coke burn-off limit.	PM emissions must not exceed 0.5 g/kg (0.5 lb PM/1,000 lb) of coke burn-off).	You have already conducted a performance test to demonstrate initial compliance with the NSPS and the measured PM emission rate is less than or equal to 0.5 g/kg (0.5 lb/1,000 lb) of coke burn-off in the catalyst regenerator. As part of the Notification of Compliance Status, you must certify that your vent meets the PM limit. You are not required to do another performance test to demonstrate initial compliance. As part of your Notification of Compliance Status, you certify that your BLD; CO_2, O_2, or CO monitor; or continuous opacity monitoring system meets the requirements in §63.1572.
* * * * * * *		

■ 30. Table 6 to Subpart UUU is amended by revising the entries for items 1.a.ii and 7 to read as follows:

TABLE 6 TO SUBPART UUU OF PART 63—CONTINUOUS COMPLIANCE WITH METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

*	*	*	*	*	*	*
For each new and existing catalytic cracking unit		Subject to this emission limit for your catalyst regenerator vent		You shall demonstrate continuous compliance by		
1.	* * *	a.	* * *			
				ii. Conducting a performance test before August 1, 2017 or within 150 days of startup of a new unit and thereafter following the testing frequency in § 63.1571(a)(5) as applicable to your unit.		
*	*	*	*	*	*	*
7. Option 1b: Elect NSPS subpart Ja requirements for PM per coke burn-off limit, not subject to the NSPS for PM in 40 CFR 60.102 or 60.102a(b)(1).		PM emissions must not exceed 1.0 g/kg (1.0 lb PM/1,000 lb) of coke burn-off.		See item 2 of this table.		
*	*	*	*	*	*	*

■ 31. Table 10 to Subpart UUU is amended by revising the entry for item 3 to read as follows:

TABLE 10 TO SUBPART UUU OF PART 63—CONTINUOUS MONITORING SYSTEMS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

*	*	*	*	*	*	*
For each new or existing catalytic cracking unit		And you use this type of control device for your vent		You shall install, operate, and maintain this type of continuous monitoring system		
*	*	*	*	*	*	*
3. During periods of startup, shutdown or hot standby electing to comply with the operating limit in § 63.1565(a)(5)(ii).		Any		Continuous parameter monitoring system to measure and record the concentration by volume (wet or dry basis) of oxygen from each catalyst regenerator vent. If measurement is made on a wet basis, you must comply with the limit as measured (no moisture correction).		

■ 32. Table 43 to Subpart UUU is amended by revising the entry for item 2 to read as follows:

TABLE 43 TO SUBPART UUU OF PART 63—REQUIREMENTS FOR REPORTS

*	*	*	*	*	*	*
You must submit		The report must contain		You shall submit the report		
*	*	*	*	*	*	*
2. Performance test and CEMS performance evaluation data.		On and after February 1, 2016, the information specified in § 63.1575(k)(1).		Semiannually according to the requirements in § 63.1575(b) and (f).		

■ 33. Table 44 to Subpart UUU is amended by revising the entries "63.6(f)(3)", "63.6(h)(7)(i)", "63.6(h)(8)", "63.7(a)(2)", "63.7(g)", "63.8(c)", "63.10(d)(2)", "63.10(e)(1)—(2)", and "63.10(c)(4)" to read as follows:

TABLE 44 TO SUBPART UUU OF PART 63—APPLICABILITY OF NESHAP GENERAL PROVISIONS TO SUBPART UUU

Citation	Subject	Applies to subpart UUU	Explanation
*	*	*	*
§ 63.6(f)(3)		Yes	Except the cross-references to § 63.6(f)(1) and (e)(1)(i) are changed to § 63.1570(c) and this subpart specifies how and when the performance test results are reported.
*	*	*	*
§ 63.6(h)(7)(i)	Report COM Monitoring Data from Performance Test.	Yes	Except this subpart specifies how and when the performance test results are reported.
*	*	*	*
§ 63.6(h)(8)	Determining Compliance with Opacity/VE Standards.	Yes	Except this subpart specifies how and when the performance test results are reported.
*	*	*	*
§ 63.7(a)(2)	Performance Test Dates	Yes	Except this subpart specifies that the results of initial performance tests must be submitted within 150 days after the compliance date.
*	*	*	*
§ 63.7(g)	Data Analysis, Recordkeeping, Reporting.	Yes	Except this subpart specifies how and when the performance test or performance evaluation results are reported and § 63.7(g)(2) is reserved and does not apply.
*	*	*	*
§ 63.8(e)	CMS Performance Evaluation	Yes	Except this subpart specifies how and when the performance evaluation results are reported.
*	*	*	*
§ 63.10(d)(2)	Performance Test Results	No	This subpart specifies how and when the performance test results are reported.
*	*	*	*
§ 63.10(e)(1)–(2)	Additional CMS Reports	Yes	Except this subpart specifies how and when the performance evaluation results are reported.
*	*	*	*
§ 63.10(e)(4)	COMS Data Reports	Yes	Except this subpart specifies how and when the performance test results are reported.
*	*	*	*

[FR Doc. 2018–25080 Filed 11–23–18; 8:45 am]

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southeast (from west to east). The area is defined as that airspace upward from 700 feet above the surface within the area bounded by a line beginning at lat. 58°27′33″ N, long. 134°37′40″ W, to lat. 58°13′13″ N, long. 134°11′51″ W, to lat. 58°05′59″ N, long. 134°21′04″ W, to lat. 58°10′51″ N, long. 134°59′18″ W, to lat. 58°23′41″ N, long. 135°31′13″ W, to lat. 58°32′22″ N, long. 135°18′32″ W, to lat. 58°27′17″ N, long. 135°01′27″ W, thence to the point of beginning. This modification reduces the airspace area to only that area necessary to contain IFR operations as they transition between the airport and en route environments. Also, Class E airspace extending upward from 1,200 feet above the surface designated for Juneau International Airport is removed since this airspace is wholly contained within the Southeast Alaska Class E en route airspace, and duplication is not necessary.

This action also makes an editorial change to the Class D airspace legal description replacing Airport/Facility Directory with Chart Supplement.

Regulatory Notices and Analyses

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a Regulatory Evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

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

Lists of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71 —DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for part 71 continues to read as follows:

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

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.11C, Airspace Designations and Reporting Points, dated August 13, 2018, and effective September 15, 2018, is amended as follows:

Paragraph 5000 Class D Airspace.

* * * * *

AAL AK D Juneau, AK [Amended]

Juneau International Airport, AK
(Lat. 58°21′17″ N, long. 134°34′42″ W)

That airspace extending upward from the surface to and including 2,500 feet MSL within a 3-mile radius of Juneau International Airport, and within 2.5 miles each side of the 271° bearing from the airport extending from the 3-mile radius to 5.2 miles west of the airport, and within 1 mile southwest and 2.6 miles northeast of the airport 135° bearing extending from the airport 3-mile radius to 5 miles southeast of the airport, excluding that airspace below 2,000 feet MSL within the area bounded by a line beginning at lat. 58°19′35″ N, long. 134°24′31″ W, to lat. 58°19′02″ N, long. 134°25′33″ W, to lat. 58°20′16″ N, long. 134°27′28″ W, to lat. 58°20′34″ N, long. 134°26′22″ W, thence to the point of beginning. This Class D airspace area is effective during the specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Chart Supplement.

Paragraph 6002 Class E Airspace Areas Designated as Surface Areas.

* * * * *

AAL AK E2 Juneau, AK [Amended]

Juneau International Airport, AK
(Lat. 58°21′17″ N, long. 134°34′42″ W)

That airspace extending upward from the surface within a 3-mile radius of Juneau International Airport, and within 2.5 miles each side of the 271° bearing from the airport extending from the 3-mile radius to 5.2 miles west of the airport, and within 1 mile southwest and 2.6 miles northeast of the airport 135° bearing extending from the airport 3-mile radius to 5 miles southeast of the airport, excluding that airspace below 2,000 feet MSL within the area bounded by a line beginning at lat. 58°19′35″ N, long. 134°24′31″ W, to lat. 58°19′02″ N, long. 134°25′33″ W, to lat. 58°20′16″ N, long. 134°27′28″ W, to lat. 58°20′34″ N, long. 134°26′22″ W, thence to the point of beginning. This Class E airspace area is effective during the specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Chart Supplement.

Paragraph 6004 Class E Airspace Designated as an Extension to a Class D or Class E Surface Area.

* * * * *

AAL AK E4 Juneau, AK [Removed]

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

* * * * *

AAL AK E5 Juneau, AK [Amended]

Juneau International Airport, AK
(Lat. 58°21′17″ N, long. 134°34′42″ W)

That airspace upward from 700 feet above the surface within the area bounded by a line beginning at lat. 58°27′33″ N, long. 134°37′40″ W, to lat. 58°13′13″ N, long. 134°11′51″ W, to lat. 58°05′59″ N, long. 134°21′04″ W, to lat. 58°10′51″ N, long. 134°59′18″ W, to lat. 58°23′41″ N, long. 135°31′13″ W, to lat. 58°32′22″ N, long. 135°18′32″ W, to lat. 58°27′17″ N, long. 135°01′27″ W, thence to the point of beginning.

Issued in Seattle, Washington, on November 1, 2018.

Shawn M. Kozica,

Manager, Operations Support Group, Western Service Center.

[FR Doc. 2018–24721 Filed 11–13–18; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 60, and 63

[EPA–HQ–OAR–2016–0510; FRL–9986–42–OAR]

RIN 2060–AS95

Testing Regulations for Air Emission Sources

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action amends certain existing testing regulations to reflect corrections, updates, and the addition of alternative equipment and methods for source testing of emissions. These revisions will improve the quality of data and provide flexibility in the use of

approved alternative procedures. The revisions do not impose any new substantive requirements on source owners or operators.

DATES: The final rule is effective on January 14, 2019. The incorporation by reference materials listed in the rule are approved by the Director of the Federal Register as of January 14, 2019.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2016–0510. All documents in the docket are listed on the *http://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy. Publicly available docket materials are available electronically through *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Ms. Lula H. Melton, Office of Air Quality Planning and Standards, Air Quality Assessment Division (E143–02), Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–2910; fax number: (919) 541–0516; email address: *melton.lula@epa.gov.*

SUPPLEMENTARY INFORMATION: The supplementary information in this preamble is organized as follows:

Table of Contents

I. General Information

A. Does this action apply to me?

The revisions promulgated in this final rule apply to industries that are subject to the current provisions of 40 Code of Federal Regulations (CFR) parts 51, 60, and 63. We did not list all of the specific affected industries or their North American Industry Classification System (NAICS) codes herein since there are many affected sources in numerous NAICS categories. If you have any questions regarding the applicability of this action to a particular entity, consult either the air permitting authority for the entity or your EPA Regional representative as listed in 40 CFR 63.13.

B. What action is the agency taking?

We are promulgating corrections and updates to regulations for source testing of emissions. More specifically, we are correcting typographical and technical errors, updating obsolete testing procedures, adding approved testing alternatives, and clarifying testing requirements.

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by January 14, 2019. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements that are the subject of this final rule may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

II. Background

The revisions to testing regulations for air emission sources were proposed in the **Federal Register** on January 26, 2018 (83 FR 3636). The public comment period ended March 27, 2018, and 83 comment letters were received from the public; 23 of the comment letters were relevant, and the other 60 comment letters were considered beyond the scope of the proposed rule. This final rule was developed based on public comments that the agency received on the proposed rule.

III. Summary of Amendments

~~*A. Method 201A of Appendix M of Part 51*~~

~~In Method 201A, in section 12.5, the denominator of equation 24 is corrected~~

as proposed; the proposed c'_p in the denominator is changed to C_p' to be consistent with the nomenclature in section 12.1. The c_p in the numerator is changed to C_p also to be consistent with the nomenclature in section 12.1.

B. Method 204 of Appendix M of Part 51

In Method 204, in section 8.2, the statement regarding equation 204–2 is corrected to ''The NEAR must be ≤0.05;'' as proposed.

C. Method 205 of Appendix M of Part 51

In Method 205, section 2.1.1 is revised to allow the use of National Institute of Standards and Technology (NIST)-traceable transfer standards to calibrate the gas dilution system as proposed. The agency continues to believe that these standards are widely available and provide the accuracy necessary to perform the calibration. Section 2.1.1 is also revised as proposed to require testers to report the results of the calibration of the dilution system to enable the regulatory authority to review this information.

D. General Provisions (Subpart A) of Part 60

In the General Provisions of part 60, § 60.17(h) is revised as proposed to add ASTM D6216–12 to the list of incorporations by reference and to re-number the remaining consensus standards that are incorporated by reference in alpha-numeric order.

E. Fossil-Fuel-Fired Steam Generators (Subpart D) Part 60

In a change from proposal, the allowed filter temperature in § 60.46(b)(2)(i) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

F. Electric Utility Steam Generating Units (Subpart Da) Part 60

In a change from proposal, the allowed filter temperature in § 60.50Da (b)(1)(ii)(A) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

G. Industrial-Commercial-Institutional Steam Generating Units (Subpart Db) Part 60

In a change from proposal, the allowed filter temperature in § 60.46b(d)(4) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

H. Small Industrial-Commercial-Institutional Steam Generating Units (Subpart Dc) Part 60

In a change from proposal, the allowed filter temperature in § 60.45c(a)(5) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

I. Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994 (Subpart Ea) Part 60

In a change from proposal, the allowed filter temperature in § 60.58a(b)(3) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

J. Glass Manufacturing Plants (Subpart CC) Part 60

In a change from proposal, the allowed filter temperatures in §§ 60.293(f) and 60.296(d)(2) are not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

K. New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces (Subpart QQQQ) Part 60

In subpart QQQQ, in Method 28WHH, in section 13.5.1, equation 8 is corrected as proposed.

L. Method 2B of Appendix A–1 of Part 60

In Method 2B, in section 12.1, the definition of ambient carbon dioxide concentration is revised as proposed. The agency continues to believe that the global monthly mean $(CO_2)_a$ concentration varies over time. Also, a website link is added to the definition as specified at proposal.

M. Method 5 of Appendix A–3 of Part 60

In a change from proposal, allowed filter temperatures in Method 5, sections 2.0, 6.1.1.2, 6.1.1.6, 6.1.1.7, and 8.5 are not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

Section 6.1.1.9 is revised as proposed to allow the use of a single temperature sensor in lieu of two temperature sensors on the dry gas meter as allowed by Technical Information Document 19 (TID–19) and the approved broadly applicable alternative, ALT–117 (see *https://www.epa.gov/emc*). Consistent with our response to the comment regarding allowing flexibility for the weighing container in section 11.2.1, Method 5B, the first sentence in section 11.2.1, Method 5 is revised similarly.

N. Method 5B of Appendix A–3 of Part 60

In a change from proposal, the allowed filter temperatures in Method 5B, sections 2.0, 6.1, and 8.2 are not revised. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating

systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

Section 11.0 is revised as proposed to replace the reference to Method 5, section 11.0 with specific analytical procedures and to report the results using Figure 5B–1 for complete data review. Section 17.0 is revised as proposed to delete the word ''Reserved'' from the title, and Figure 5B–1 (Analytical Data Sheet) is added.

O. Method 5I of Appendix A–3 of Part 60

In a change from proposal, Method 5I, sections 2.1 and 8.5.2.2 are not revised to tighten the allowed filter temperatures. Based on comments we received on the proposed revisions, we are deferring finalizing the proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

P. Method 7 of Appendix A–4 of Part 60

In Method 7, sections 10.1.2 and 11.3 reference erroneous sections; the correct section is inserted, as proposed. The proposed referenced section 10.1.1.2 is changed to 10.1.1 to include procedures in both sections 10.1.1.1 and 10.1.1.2.

Q. Method 8 of Appendix A–4 of Part 60

As proposed, Method 8, sections 6.1.1.1 through 6.1.1.4 are renumbered to 6.1.1.2 through 6.1.1.5; a new section 6.1.1.1 is added to clarify the requirements that apply to the probe nozzle; and, in response to comments, Figure 8–1 (Sulfuric Acid Sampling Train) is corrected by: (1) Modifying the impinger graphics to make it consistent with the text in section 6.1.1.4 and (2) revising the proposed label S-Type Pitot Tube to Type S Pitot Tube for consistency. The proposed first sentence in section 6.1.1.1 is revised to ''Borosilicate or quartz glass with a sharp, tapered leading edge and coupled to the probe liner using a polytetrafluoroethylene (PTFE) or glass-lined union (*e.g.,* fused silica, Silico, or equivalent).'' Based on a public comment that recommended adding Silco coated stainless steel unions as an option for Teflon unions, and for consistency with other test methods, we have replaced Teflon with the generic option polytetrafluoroethylene (PTFE).

R. Method 18 of Appendix A–6 of Part 60

In Method 18, in section 13.1, the erroneous paragraph (c) designation is re-designated as (b), as proposed.

S. Method 22 of Appendix A–7 of Part 60

In Method 22, sections 11.2.1 and 11.2.2 are revised as proposed to allow digital photography to be used for a subset of the recordkeeping requirements. As proposed, section 11.2.3 is added to specify the requirements for digital photographic records. In response to comments on the proposal, the next to the last sentence in section 11.2.3 regarding photographs that must be taken within 15 minutes of the observation period is revised from the proposal, and another sentence is added to provide clarity. The revised and new sentences read: ''The photograph(s) representing the environmental conditions including the sky conditions and the position of the sun relative to the observer and the emission point must be taken within a reasonable time of the observation (*i.e.,* 15 minutes). When observations are taken from exactly the same observation point on a routine basis (*e.g.,* daily) and as long as there are no modifications to the units depicted, only a single photograph each day is necessary to document the observer's location relative to the emissions source, the process unit being observed, and the location of potential and actual emission points.'' The agency notes that ALT–109 (see *https://www.epa.gov/emc*) is the associated broadly applicable alternative that allows the use of digital photographs for specific recordkeeping requirements.

T. Method 26 of Appendix A–8 of Part 60

As proposed, Method 26, section 6.2.2 is revised to allow the use of glass sample storage containers as an option to allow flexibility and to be consistent with Method 26A. The proposed title of section 6.2.2, ''Storage Bottles,'' is changed to ''Storage Containers'' to be consistent with the language in section 6.2.2.

U. Method 26A of Appendix A–8 of Part 60

As proposed, in Method 26A, section 6.2.1 is revised to remove the language regarding sample storage containers. In response to comments on our proposal, we have determined that high-density polyethylene is an acceptable material for sample storage containers in addition to the currently allowed glass. Therefore, in a new section 6.2.4., we have specified that both high-density polyethylene and glass are acceptable sample storage containers.

V. Test Method 28WHH of Appendix A–8 of Part 60

In Test Method 28WHH, equation 8 in section 13.5.1 is corrected, as proposed.

W. Performance Specification 1 of Appendix B of Part 60

As proposed, in Performance Specification 1, references to ASTM D6216–98 (in sections 2.1, 3.1, 6.1, 8.1(1), 8.1(3)(ii), 8.2(1), 8.2(2), 8.2(3), 9.0, 12.1, 13.0, 13.1, 13.2, and 16.0 paragraph 8) are replaced with ASTM D6216–12. As noted at proposal, if the initial certification of the continuous opacity monitoring system (COMS) has already occurred using D6216–98, D6216–03, or D6216–07, it will not be necessary to recertify using D6216–12. In response to comments on our decision to add ASTM D6216 to the list of consensus standards, the April 1998 publication date for ASTM D6216 in paragraph 8 in section 16.0 is replaced with October 2012, the ASTM D6216–12 publication date. In response to comments, for consistency with section 2.1, and for purposes of clarification, the note at the end of section 2.1 is added to section 13.0.

X. Performance Specification 2 of Appendix B of Part 60

In Performance Specification 2, section 13.2 is replaced with a table that indicates the relative accuracy performance specifications, as proposed. Given that the equals to (=) signs were erroneously omitted from several of the < and > values during publication of the table in the proposed rule, these values have been corrected.

Y. Performance Specification 3 of Appendix B of Part 60

In Performance Specification 3, the two sentences in section 12.0 that read, ''Calculate the arithmetic difference between the RM and the CEMS output for each run. The average difference of the nine (or more) data sets constitute the RA.'' are deleted, as proposed; these two sentences are no longer necessary since equations 3–1 and 3–2 would be moved from section 13.2 to section 12.0. The sentence, ''Calculate the RA using equations 3–1 and 3–2.'' is added to the beginning of section 12.0.

Z. Performance Specification 11 of Appendix B of Part 60

In Performance Specification 11, section 13.1, the word ''average'' erroneously exists in the second sentence and is deleted, as proposed.

AA. Performance Specification 15 of Appendix B of Part 60

As proposed, in Performance Specification 15, section 13.0 is added as ''Method Performance [Reserved].''

BB. Performance Specification 18 of Appendix B of Part 60

As proposed, in Performance Specification 18, in section 11.8.7, the last sentence is revised to clarify the duration of the drift check. In Table 1, the erroneous acronym ''NO_2'' is replaced with ''NO,'' as proposed. In the appendix of Performance Specification 18, the inadvertently omitted reserved section 12.0 is added, as proposed.

CC. Procedure 1 of Appendix F of Part 60

As proposed, in Procedure 1, in section 5.1.2 (1), the sentence immediately following the table that reads, ''Challenge the CEMS three times at each audit point, and use the average of the three responses in determining accuracy.'' is replaced with, ''Introduce each of the audit gases, three times each for a total of six challenges. Introduce the gases in such a manner that the entire CEMS is challenged. Do not introduce the same gas concentration twice in succession.'' In order to obtain six distinct readings during the cylinder gas audit (CGA), the same gas must not be introduced twice in succession, and this revised language accurately reflects this standard scientific practice. As also proposed, in section 5.1.2 (3), the reference to EPA's traceability protocol for gaseous calibration standards is updated, and the language regarding the use of EPA Method 205 for dilution of audit gases is clarified.

DD. General Provisions (Subpart A) of Part 63

Sections 63.7(g)(2), 63.7(g)(2)(v), and 63.8(c)(5)(i) of the General Provisions (subpart A) of part 63 are revised, as proposed, to require the reporting of specific test data for continuous monitoring system performance evaluation tests and ongoing quality assurance (QA) tests. These data elements are required regardless of the format of the report, *i.e.*, electronic or paper. These modifications will ensure that performance evaluation and QA test reporting include all data necessary for the compliance authority to assess and assure the quality of the reported data and that the reported information describes and identifies the specific unit covered by the evaluation test report. In response to comment, we specified the level of reporting needed for continuous parameter monitoring systems (CPMS) versus other continuous monitoring systems including continuous emission monitoring systems (CEMS), COMS, and predictive emissions monitoring systems (PEMS).

EE. Wool Fiberglass Manufacturing (Subpart NNN) Part 63

In a change from proposal, the allowed filter temperature in § 63.1385(a)(5) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

FF. Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (Subpart DDDDD) Part 63

As proposed, in Table 6 of subpart DDDDD, row 1.f. is revised to allow the use of EPA SW–846–7471B (for liquid samples) in addition to EPA SW–846–7470A for measuring mercury to allow for compliance flexibility.

GG. Coal- and Oil-Fired Electric Utility Steam Generating Units (Subpart UUUUU) Part 63

In a change from proposal, the allowed filter temperature in § 63.10010(h)(7)(i)(1) is not revised. Based on comments we received on the proposed revisions, we are deferring finalizing proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

As proposed, in Table 5, Method 5I is specified as a test method option because, as explained at proposal, Method 5I is designed for low particulate matter (PM) application.

HH. Method 303 of Appendix A of Part 63

In Method 303, section 12.4, equation 303–3 is corrected, as proposed, by inserting ''where y =:'' in front of the equation.

II. Method 308 of Appendix A of Part 63

As proposed, in Method 308, deionized distilled water replaces the aqueous n-proponal solution; the affected sections are 2.0, 7.2.2, 7.2.3.3, and 11.3.2. Section 7.2.2, which defines the aqueous n-proponal solution, is removed, as proposed. In section 7.2.3.3, the erroneous ''four'' is replaced as proposed, with ''three'' in the sentence that reads ''Pipette 5, 15, and 25 ml of this standard, respectively into four 50-ml volumetric flasks.'' Section 8.1.2 is revised, as proposed, to require a leak check prior to the sampling run (in addition to after the sampling run) for QA purposes; as explained at proposal, requiring a leak check prior to the sampling run would potentially save time and money. In section 9.1, methanol spike recovery check is added as a quality control (QC) measure in Table 9.1, as proposed. In section 12.1, variables used in equations 308–4 and 308–5 are added and section 12.5, which includes equations 308–4 and 308–5, is added, as proposed. In section 13.0, the title ''Reserved'' is replaced with ''Method Performance'' and QA requirements would be added to be consistent with other methods, as proposed. The erroneous proposed paragraph (a) of section 13.0 is replaced, as proposed, with ''Calibration standards must meet the requirements in section 10.2.1 or 10.2.2 as applicable.''

JJ. Method 320 of Appendix A of Part 63

In section 8.2.2.4, the denominator in equation 2 is corrected from P_{ss} to P_s, as proposed. In section 9.2.3, the word ''where:'' in the statement, ''Calculate the dilution ratio using the tracer gas as follows: where:'' is deleted, as proposed. Also in section 9.2.3, the inadvertently superscripted ''dir'' on the definition of spike is subscripted, as proposed.

KK. Method 323 of Appendix A of Part 63

In Method 323, section 12.9, the denominator in equation 323–8 is corrected, as proposed.

LL. Method 325A of Appendix A of Part 63

In Method 325A, section 8.2.1.3 is revised, as proposed, to clarify that only one extra sampling site is required near known sources of volatile organic compounds (VOCs) when the source is located both within 50 meters of the boundary and between two monitors. Based on a public comment we received on the proposed regulatory text, wording changes have been made to the language in section 8.2.1.3. As proposed, the label under Figure 8.1 is corrected from ''Refinery (20% angle)'' to ''Refinery (20° angle).'' Section 8.2.3.2 is revised, as proposed, to include facilities with a monitoring perimeter length equal to 7,315 meters (24,000 feet). Section 8.2.3.3 is added, as

proposed, to provide clarification and an equivalent procedure in Option 2 (linear distance between sites) for site locations that parallel section 8.2.2.2.4 in Option 1 (radial distance between sites). In response to comments, section 8.4.3 is added to address worker safety during extenuating circumstances.

MM. Method 325B of Appendix A of Part 63

In Method 325B, section 9.3.2 is revised, as proposed, to correct an error in the number of field blank samples required for a sampling period and to provide consistency with the sample analysis required in Method 325B. In sections 9.13 and 11.3.2.5, the erroneous reference to section 10.6.3 is corrected to 10.0, as proposed. Also in section 11.3.2.5, the erroneous reference to section 10.9.5 is corrected to 9.13, as proposed. Section 12.2.2 is revised, as proposed, to correct the calculation of target compound concentrations at standard conditions, and the erroneous reference to U_{std} in the note in section 12.2.2 is revised to U_{NTP}. Sections 12.2.3 and 12.2.4 are deleted, as proposed, because the equations for target concentrations are incorrect. Table 17–1 is revised, as proposed, to add inadvertently omitted QC criteria from section 9.3.3.

IV. Public Comments on the Proposed Rule

Eighty-three (83) comment letters were received from the public; 23 of the comment letters were relevant, and the other 60 comment letters were considered as beyond the scope of the proposed rule. The public comments and the agency's responses are summarized in the Response to Comments document located in the docket for this rule. See the **ADDRESSES** section of this preamble.

A summary of the relevant portions of significant comments that we received on the proposal and agency responses are presented below.

Comment: Three commenters provided comments on our proposed revisions to the General Provisions (Subpart A) of Part 63. One commenter stated that the proposed revisions impose new requirements on CMS performance evaluations and QA testing for types of monitors not previously subject to such requirements. Another commenter remarked that the proposed revisions to various requirements in Part 63 revisions were vague. Yet another commenter remarked that the proposed revisions to § 63.8(e)(5) would shorten the CMS performance evaluation reporting period for CMS associated with performance tests.

Response: We disagree with the comment that the proposed changes to § 63.8(e)(5)(i) would impose new requirements given that at proposal, the agency had explained that they were intended to clarify and codify data elements and reporting requirements that are already routinely requested by the Administrator's delegated authorities. With regard to § 63.8(e)(5), in a change from proposal, we have retained the existing requirement that allows for the simultaneous submission of the report of a CMS performance evaluation with results of performance testing required under 40 CFR 63.7. We also edited the final rule language for 40 CFR 63.7(g)(2)(v) to improve clarity and to eliminate confusion.

Comment: Fifteen commenters provided comments arguing against the proposal to tighten the filter temperature tolerance in 40 CFR 60.46(b)(2)(i); 60.50Da(b)(1)(ii)(A); 60.45c(a)(5); 60.58a(b)(3); 60.293(f); 60.296(d)(2); 63.1385(a)(5); and sections 2.0, 6.1.1.2, 6.1.1.6, 6.1.1.7 and 8.5 of Method 5, Appendix A–3 of Part 60. They cited issues that included: weather (*e.g.,* ambient temperature fluctuations and windy conditions); costs; lack of justification and data for the revision; inconsistent language (*e.g.,* the use of ''shall'' vs. ''may'' and proposed revisions to temperature tolerance in Methods 5, 5B, and 5I but not in Methods 5D, 5E, and 5F); and safety risks. Nine commenters remarked that ambient conditions (cold climates, wind gusts, etc.) can cause temperature fluctuations that are difficult to manage. More specifically, one commenter stated that the reduced allowable temperature range would be problematic during testing in cold, windy ambient conditions that are persistent in the winter months in northern climates because the time required for temperature recovery after a component change in these conditions could add hours and possibly days to testing programs. One commenter remarked that the proposed ±5 °C is unattainable for sources in cold or windy climates.

Eight commenters stated that alteration or replacement of equipment components would likely be necessary to achieve the proposed temperature tolerances resulting in additional costs. One commenter noted potential equipment improvements, such as increased probe sheath tubing diameter to make room for added insulation around every probe heater; re-design of filter heating ovens; improved sealing and insulation of the openings at the inlet and outlet of filter heating ovens; and/or for sources with high stack temperatures, more frequent use of air-cooled or water-cooled probes. One commenter remarked that this revision would force cold weather stack testers to replace or retrofit equipment with higher power heating devices and possibly more refined control devices which would be costly. One commenter remarked that this revision will most likely require air sampling equipment suppliers to redesign sample probes by either increasing sheath diameter, altering the placement or increasing the number of thermocouples used to control the probe heating system, and/or increasing the insulation around the sample liner. The commenter added that an increase in the diameter of the probe sheath would have a cascading effect either requiring test companies to purchase new sample hot boxes or retrofit existing sample hot boxes to accommodate the increased probe sheath diameter.

Seven commenters stated that neither information nor data was provided to support, justify, or quantify the claimed increased precision of filterable PM measurements, and a few of these commenters noted that the Electric Power Research Institute (EPRI) paper that the EPA used as the basis for tightening the filter temperature tolerance was from a comparison of results measured at four coal-fired power plants.

One commenter requested that the statement in § 60.50Da(b)(1)(ii)(A), ''The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of no greater than 160 ±5 °C (320 ±9 °F),'' be changed to, ''The probe and filter holder heating system in the sampling train shall be set to provide an average gas temperature of 160 ±5 °C (320 ±9 °F),'' because they believe that this was the agency's intent. Similarly, another commenter requested that the statement in § 60.296(d)(2), ''The probe and filter holder heating system may be set to provide a gas temperature no greater than 177 ±5 °C (320 ±9 °F),'' be changed to, ''The probe and filter holder heating system shall be set to provide an average gas temperature 160 ±5 °C (320 ±9 °F),'' because they believe that this was the agency's intent. One commenter also recommended changing the sentence in Method 5B to, ''The collected sample is then heated in an oven at 160 °C (320 °F) for 6 hours . . . ,'' to, ''The collected sample is then heated in an oven at 160 ±5 °C (320 ±9 °F) for 6 hours . . .,'' to be internally consistent.

Three commenters noted that if the temperature tolerances are changed in Method 5, methods that reference Method 5 (namely Method 5D, section

2.1; Method 5E, section 2.0; and Method 5F, section 2.0) would also need to be revised.

Three commenters remarked that tightening the filter temperature tolerance conflicts with the assertion that the proposed rule will improve the quality of data but will not impose new substantive requirements. Two of the three commenters further remarked that the proposed rule does not meet the requirements of Executive Order 13771 nor the Paperwork Reduction Act (PRA).

Three commenters acknowledged that an improvement in measurement precision could benefit the data quality in limited situations, such as the Mercury and Air Toxics Standards (MATS).

Four commenters remarked that if the proposed revisions to the temperature tolerances lead to a measurable change in reported PM emissions, sources that were previously in compliance with their emission standards may become non-compliant; one commenter added that the opposite situation may occur. One commenter stated that the proposed revision may have the unintended consequence of redefining the filterable PM being measured leading to either higher or lower PM measurements as compared to sampling runs conducted with wider tolerances.

Two commenters mentioned that this revision could result in a potential safety risk. One of the commenters remarked that the added weight and handling difficulties associated with air- or water-cooled probes (if necessary to control the probe temperature) can increase safety risks to testing personnel, and the other commenter remarked that the proposed requirements may require the use of encapsulated probes which are heavy and cumbersome resulting in hazards.

Response: In response to these comments and in a change from proposal, we are deferring finalizing proposed revisions of the temperature tolerances of probe and filter holder heating systems as part of this rulemaking. We will continue to review supporting information and data we received on the proposed rule and may propose either revisions or similar requirements as part of future rulemakings.

V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.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 was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is considered an Executive Order 13771 deregulatory action. This final rule provides meaningful burden reduction by allowing regulated facilities the flexibility to use newly-approved alternative procedures for compliance demonstration purposes, which may result in lower labor costs for some facilities (*e.g.,* allowing digital photography in lieu of manual documentation in EPA Method 22); lower compliance testing costs (*e.g.,* additional sample storage container options now allowed by Method 26); reducing the likelihood of re-testing (*e.g.,* revised QA requirements in Method 308); and expediting data processing (*e.g.,* simplified calculations in Method 325B).

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. The revisions do not substantively revise the existing information collection requirements but simply corrects, updates, and clarifies performance testing and continuous monitoring 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. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This action will not impose emission measurement requirements beyond those specified in the current regulations, nor does it change any emission standard. We have, therefore, concluded that this action will have no net regulatory burden for all directly regulated small entities.

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 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 action simply corrects and updates existing testing regulations. 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. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

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. The EPA used ASTM D6216–12 for continuous opacity monitors in Performance Specification 1. The ASTM D6216–12 standard covers the procedure for certifying continuous opacity monitors and includes design and performance specifications, test procedures, and QA requirements to ensure that continuous opacity monitors meet minimum design and calibration

requirements necessary, in part, for accurate opacity monitoring measurements in regulatory environmental opacity monitoring applications subject to 10 percent or higher opacity standards.

The ASTM D6216–12 standard was developed and adopted by the American Society for Testing and Materials (ASTM). The standard may be obtained from *http://www.astm.org* or from the ASTM at 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action is not subject to Executive Order 12898 (59 FR 7629, February 16, 1994) because it does not establish an environmental health or safety standard. This action is a technical correction to previously promulgated regulatory actions and does not have an impact on human health or the environment.

L. 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

~~*40 CFR Part 51*~~

~~Environmental protection, Air pollution control, Performance specifications, Test methods and procedures.~~

40 CFR Part 60

Environmental protection, Air pollution control, Incorporation by reference, Performance specifications, Test methods and procedures.

~~*40 CFR Part 63*~~

~~Environmental protection, Air pollution control, Incorporation by reference, Performance specifications, Test methods and procedures.~~

Dated: November 5, 2018.

Andrew R. Wheeler,

Acting Administrator.

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

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

■ 2. Amend appendix M to part 51 as follows:

■ a. Revise section 12.5, equation 24, in Method 201A.

■ b. Revise the last sentence in section 8.2 in Method 204.

■ c. Revise section 2.1.1 in Method 205.

The revisions read as follows:

Appendix M to Part 51—Recommended Test Methods for State Implementation Plans

* * * * *

Method 201A—Determination of PM_{10} and $PM_{2.5}$ ~~Emissions From Stationary Sources (Constant Sampling Rate Procedure)~~

* * * * *

~~12.5....~~

$$t_n = \left[\frac{C_p\sqrt{\Delta p_n}}{C_{p'}\left[\sqrt{\Delta p}\right]_{avg}}\right]\left[\frac{t_z}{N_{tp}}\right] \quad \text{(Eq. 24)}$$

* * * * *

~~**Method 204—Criteria for and Verification of a Permanent or Temporary Total Enclosure**~~

* * * * *

~~8.2....~~

~~The NEAR must be ≤0.05.~~

* * * * *

~~**Method 205—Verification of Gas Dilution Systems for Field Instrument Calibrations**~~

* * * * *

~~2.1.1 The gas dilution system shall be recalibrated once per calendar year using NIST-traceable flow standards with an uncertainty ≤0.25 percent. You shall report the results of the calibration by the person or manufacturer who carried out the calibration whenever the dilution system is used, listing the date of the most recent calibration, the due date for the next calibration, calibration point, reference flow device (ID, S/N), and acceptance criteria. Follow the manufacturer's instructions for the operation and use of the gas dilution system. A copy of the manufacturer's instructions for the operation of the instrument, as well as the most recent calibration documentation, shall be made available for inspection at the test site.~~

* * * * *

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

■ 3. The authority citation for part 60 continues to read as follows:

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

■ 4. In § 60.17, revise paragraph (h)(177) to read as follows:

§ 60.17 Incorporations by reference.

* * * * *

(h) * * *

(177) ASTM D6216–12, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, approved October 1, 2012; IBR approved for appendix B to part 60.

* * * * *

■ 5. In Appendix A–1 to part 60, revise ''$(CO_2)_a$'' in section 12.1 in Method 2B to read as follows:

Appendix A–1 to Part 60—Test Methods 1 through 2F

* * * * *

Method 2B—Determination of Exhaust Gas Volume Flow Rate From Gasoline Vapor Incinerators

* * * * *

12.1 * * *

$(CO_2)_a$ = Ambient carbon dioxide concentration, ppm (if not measured during the test period, may be assumed to equal the global monthly mean CO_2 concentration posted at *http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html#global_data*).

* * * * *

■ 6. In appendix A–3 to part 60:

■ a. Revise sections 6.1.1.9 and 11.2.1 in Method 5.

■ b. Revise section 11.0 in Method 5B.

■ c. Add section 17.0 in Method 5B.

The revisions and addition read as follows:

Appendix A–3 to Part 60—Test Methods 4 through 5I

* * * * *

Method 5—Determination of Particulate Matter Emissions From Stationary Sources

* * * * *

6.1.1.9 Metering System. Vacuum gauge, leak-free pump, calibrated temperature sensors, dry gas meter (DGM) capable of measuring volume to within 2 percent, and related equipment, as shown in Figure 5–1. Other metering systems capable of maintaining sampling rates within 10 percent of isokinetic and of determining sample volumes to within 2 percent may be used, subject to the approval of the Administrator. When the metering system is used in conjunction with a pitot tube, the system shall allow periodic checks of isokinetic rates. The average DGM temperature for use in the calculations of section 12.0 may be obtained by averaging the two temperature sensors located at the inlet and outlet of the DGM as shown in Figure 5–3 or alternatively from a single temperature sensor located at the immediate outlet of the DGM or the plenum of the DGM.

* * * * *

11.2.1 Container No. 1. Leave the contents in the shipping container or transfer the filter and any loose PM from the sample container to a tared weighing container. Desiccate for 24 hours in a desiccator containing anhydrous calcium sulfate. Weigh to a constant weight, and report the results to the nearest 0.1 mg. For the purposes of this section, the term ''constant weight'' means a difference of no more than 0.5 mg or 1 percent of total weight less tare weight, whichever is greater, between two consecutive weighings, with no less than 6 hours of desiccation time between weighings. Alternatively, the sample may be oven dried at 104 °C (220 °F) for 2 to 3 hours, cooled in the desiccator, and weighed to a constant weight, unless otherwise specified by the Administrator. The sample may be oven dried at 104 °C (220 °F) for 2 to 3 hours. Once the sample has cooled, weigh the sample, and use this weight as a final weight.

* * * * *

Method 5B-Determination of Nonsulfuric Acid Particulate Matter Emissions From Stationary Sources

* * * * *

11.0 Analytical Procedure

11.1 Record and report the data required on a sheet such as the one shown in Figure 5B–1.

11.2 Handle each sample container as follows:

11.2.1 Container No. 1. Leave the contents in the shipping container or transfer the filter and any loose PM from the sample container to a tared non-reactive oven-proof container. Oven dry the filter sample at a temperature of 160 ±5 °C (320 ±9 °F) for 6 hours. Cool in a desiccator for 2 hours, and weigh to constant weight. Report the results to the nearest 0.1 mg. For the purposes of this section, the term ''constant weight'' means a difference of no more than 0.5 mg or 1 percent of total weight less tare weight, whichever is greater, between two consecutive weighings, with no less than 6 hours of desiccation time between weighings.

11.2.2 Container No. 2. Note the level of liquid in the container, and confirm on the analysis sheet whether leakage occurred during transport. If a noticeable amount of leakage has occurred, either void the sample or use methods, subject to the approval of the Administrator, to correct the final results. Measure the liquid in this container either volumetrically to ±1 ml or gravimetrically to ±0.5 g. Transfer the contents to a tared 250 ml beaker, and evaporate to dryness at ambient temperature and pressure. Then oven dry the probe sample at a temperature of 160 ±5 °C (320 ±9 °F) for 6 hours. Cool in a desiccator for 2 hours, and weigh to constant weight. Report the results to the nearest 0.1 mg.

11.2.3 Container No. 3. Weigh the spent silica gel (or silica gel plus impinger) to the nearest 0.5 g using a balance. This step may be conducted in the field.

11.2.4 Acetone Blank Container. Measure the acetone in this container either volumetrically or gravimetrically. Transfer the acetone to a tared 250 ml beaker, and evaporate to dryness at ambient temperature and pressure. Desiccate for 24 hours, and weigh to a constant weight. Report the results to the nearest 0.1 mg.

Note: The contents of Container No. 2 as well as the acetone blank container may be evaporated at temperatures higher than ambient. If evaporation is done at an elevated temperature, the temperature must be below the boiling point of the solvent; also, to prevent ''bumping,'' the evaporation process must be closely supervised, and the contents of the beaker must be swirled occasionally to maintain an even temperature. Use extreme care, as acetone is highly flammable and has a low flash point.

* * * * *

17.0 Tables, Diagrams, Flowcharts, and Validation Data

Container number	Weight of particulate collected, mg		
	Final weight	Tare weight	Weight gain
1.			
2.			
Total:			
Less acetone blank			
Weight of particulate matter			

	Volume of liquid water collected	
	Impinger volume, ml	Silica gel weight, g
Final		
Initial		
Liquid collected		
Total volume collected		g* ml

* Convert weight of water to volume by dividing total weight increase by density of water (1 g/ml).

Figure 5B–1. Analytical Data Sheet

* * * * *

■ 7. In appendix A–4 to part 60:

■ a. Revise sections 10.1.2 and 11.3 in Method 7.

■ b. Redesignate sections 6.1.1.1 through 6.1.1.4 as sections 6.1.1.2 through 6.1.1.5 in Method 8.

■ c. Add a new section 6.1.1.1 in Method 8.

■ d. Revise Figure 8–1 in Method 8.

The revisions and addition read as follows:

Appendix A–4 to Part 60—Test Methods 6 Through 10B

* * * * *

Method 7—Determination of Nitrogen Oxide Emissions From Stationary Sources

* * * * *

10.1.2 Determination of Spectrophotometer Calibration Factor K_c. Add 0 ml, 2.0 ml, 4.0 ml, 6.0 ml, and 8.0 ml of the KNO_3 working standard solution (1 ml = 100 µg NO_2) to a series of five 50-ml volumetric flasks. To each flask, add 25 ml of absorbing solution and 10 ml water. Add 1 N NaOII to each flask until the pII is between 9 and 12 (about 25 to 35 drops). Dilute to the mark with water. Mix thoroughly, and pipette a 25-ml aliquot of each solution into a separate porcelain evaporating dish. Beginning with the evaporation step, follow the analysis procedure of section 11.2 until the solution has been transferred to the 100-ml volumetric flask and diluted to the mark. Measure the absorbance of each solution at the optimum wavelength as determined in section 10.1.1. This calibration procedure must be repeated on each day that samples are analyzed. Calculate the spectrophotometer calibration factor as shown in section 12.2.

* * * * *

11.3 Sample Analysis. Mix the contents of the flask thoroughly, and measure the absorbance at the optimum wavelength used for the standards (section 10.1.1), using the blank solution as a zero reference. Dilute the sample and the blank with equal volumes of water if the absorbance exceeds A_4, the absorbance of the 400-µg NO_2 standard (see section 10.1.3).

* * * * *

Method 8—Determination of Sulfuric Acid and Sulfur Dioxide Emissions From Stationary Sources

* * * * *

6.1.1.1 Probe Nozzle. Borosilicate or quartz glass with a sharp, tapered leading edge and coupled to the probe liner using a polytetrafluoroethylene (PTFE) or glass-lined union (*e.g.,* fused silica, Slico, or equivalent). When the stack temperature exceeds 210 °C (410 °F), a leak-free ground glass fitting or other leak free, non-contaminating fitting must be used to couple the nozzle to the probe liner. It is also acceptable to use a one-piece glass nozzle/liner assembly. The angle of the taper shall be ≤30°, and the taper shall be on the outside to preserve a constant internal diameter. The probe nozzle shall be of the button-hook or elbow design, unless otherwise specified by the Administrator. Other materials of construction may be used, subject to the approval of the Administrator. A range of nozzle sizes suitable for isokinetic sampling should be available. Typical nozzle sizes range from 0.32 to 1.27 cm (⅛ to ½ in) inside diameter (ID) in increments of 0.16 cm (1/16 in). Larger nozzles sizes are also available if higher volume sampling trains are used.

* * * * *

17.0 * * *

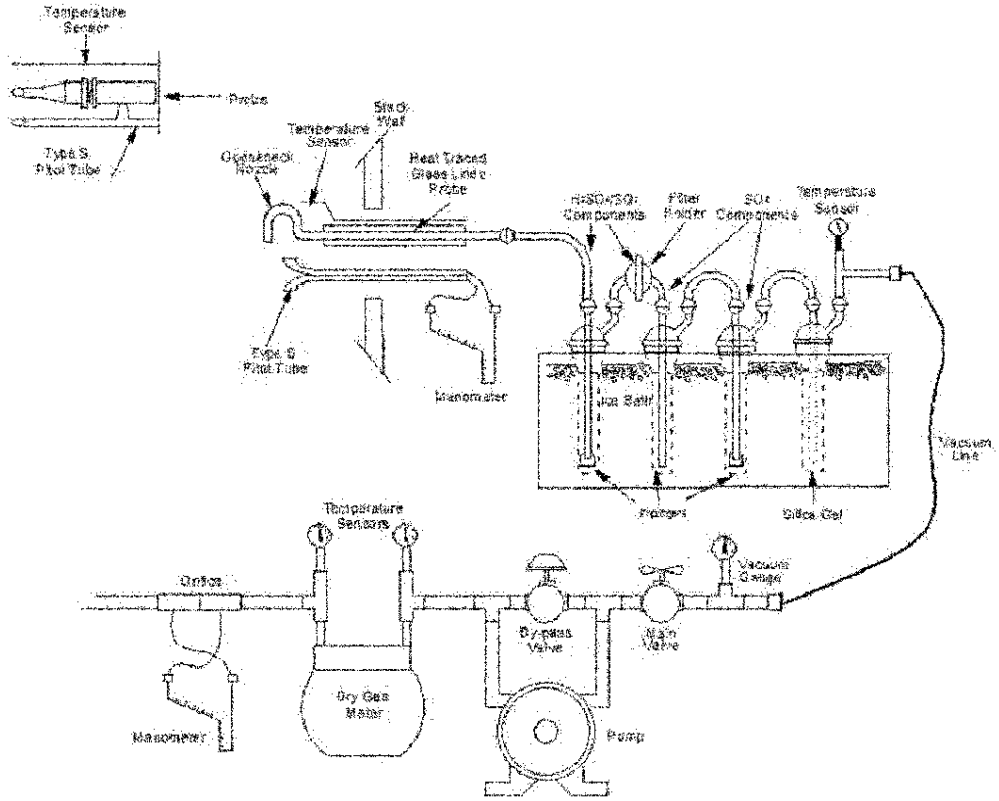

Figure 8-1. Sulfuric Acid Sampling Train

* * * * *

Appendix A–6 to Part 60—[Amended]

■ 8. In Appendix A–6 to part 60, redesignate paragraph (c) as paragraph (b) in section 13.1 in Method 18.

■ 9. In appendix A–7 to part 60:

■ a. Revise sections 11.2.1 and 11.2.2 in Method 22.

■ b. Add section 11.2.3 in Method 22.

The revisions and addition read as follows:

Appendix A–7 to Part 60—Test Methods 19 Through 25E

* * * * *

Method 22—Visual Determination of Fugitive Emissions From Material Sources and Smoke Emissions From Flares

* * * * *

11.2.1 Outdoor Location. Record the following information on the field data sheet (Figure 22–1): Company name, industry, process unit, observer's name, observer's affiliation, and date. Record also the estimated wind speed, wind direction, and sky condition. Sketch the process unit being observed, and note the observer location relative to the source and the sun. Indicate the potential and actual emission points on the sketch. Alternatively, digital photography as described in section 11.2.3 may be used for a subset of the recordkeeping requirements of this section.

11.2.2 Indoor Location. Record the following information on the field data sheet (Figure 22–2): Company name, industry, process unit, observer's name, observer's affiliation, and date. Record as appropriate the type, location, and intensity of lighting on the data sheet. Sketch the process unit being observed, and note the observer location relative to the source. Indicate the potential and actual fugitive emission points on the sketch. Alternatively, digital photography as described in section 11.2.3 may be used for a subset of the recordkeeping requirements of this section.

11.2.3 Digital Photographic Records. Digital photographs, annotated or unaltered, may be used to record and report sky conditions, observer's location relative to the source, observer's location relative to the sun, process unit being observed, potential emission points and actual emission points for the requirements in sections 11.2.1 and 11.2.2. The image must have the proper lighting, field of view and depth of field to properly distinguish the sky condition (if applicable), process unit, potential emission point and actual emission point. At least one digital photograph must be from the point of the view of the observer. The photograph(s) representing the environmental conditions including the sky conditions and the position of the sun relative to the observer and the emission point must be taken within a reasonable time of the observation (*i.e.*, 15 minutes). When observations are taken from exactly the same observation point on a routine basis (*i.e.*, daily) and as long as there are no modifications to the units depicted, only a single photograph each is necessary to document the observer's location relative to the emissions source, the process unit being observed, and the location of potential and actual emission points. Any photographs altered or annotated must be retained in an unaltered format for recordkeeping purposes.

* * * * *

■ 10. In appendix A–8 to part 60:

■ a. Revise section 6.2.2 in Method 26.

■ b. Revise section 6.2.1 in Method 26A.

■ c. Add section 6.2.4 in Method 26A.

■ d. ~~Revise equation 8 in section 13.5.1 in Test Method 28WHH.~~

The revisions and additions read as follows:

Appendix A–8 to Part 60—Test Methods 26 Through 30B

* * * * *

Method 26—Determination of Hydrogen Halide and Halogen Emissions From Stationary Sources Non-Isokinetic Method

* * * * *

6.2.2 Storage Containers. 100- or 250-ml, high-density polyethylene or glass sample storage containers with Teflon screw cap liners to store impinger samples.

* * * * *

Method 26A—Determination of Hydrogen Halide and Halogen Emissions From Stationary Sources Isokinetic Method

* * * * *

6.2.1 Probe-Liner and Probe-Nozzle Brushes, Wash Bottles, Petri Dishes, Graduated Cylinder and/or Balance, and Rubber Policeman. Same as Method 5, sections 6.2.1, 6.2.2, 6.2.4, 6.2.5, and 6.2.7.

* * * * *

6.2.4 Sample Storage Containers. High-density polyethylene or glass sample storage containers with Teflon screw cap liners to store impinger samples.

* * * * *

~~**Test Method 28WHH for Measurement of Particulate Emissions and Heating Efficiency of Wood-Fired Hydronic Heating Appliances**~~

~~* * * * *~~

~~13.5.1 . . . . .~~

$$c_i = (62.56 + (-.0003413 \times T3_i) + (-.00006225 \times T3_i^2)) 0.1337, \text{lbs/gal} \quad \text{Eq. 8}$$

* * * * *

■ 11. In appendix B to part 60:

■ a. Add the following entries to the list of Performance Specifications in numeric order:

■ i. Performance Specification 12B—Specifications and Test Procedures for Monitoring Total Vapor Phase Mercury Emissions From Stationary Sources Using A Sorbent Trap Monitoring System

■ ii. Performance Specification 17 [Reserved]

■ iii. Performance Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources

■ iv. PS–18—Appendix A Standard Addition Procedures

■ b. In Performance Specification 1, remove "D 6216–98" wherever it appears and add in its place "D6216–12", and revise section 2.1, the introductory text of section 13.0, sections 13.1 and 13.2, and paragraph 8. of section 16.0.

■ c. In Performance Specification 2, revise section 13.2.

■ d. In Performance Specification 3, revise sections 12.0 and 13.2.

■ e. In Performance Specification 11, revise section 13.1.

■ f. In Performance Specification 15, add reserved section 13.0.

■ g. In Performance Specification 18, revise section 11.8.7 and table 1 in section 17.0, and add reserved section 12.0 to PS–18.

The revisions and additions read as follows:

Appendix B to Part 60—Performance Specifications

* * * * *

Performance Specification 1—Specifications and Test Procedures for Continuous Opacity Monitoring Systems in Stationary Sources

* * * * *

2.1 ASTM D6216–12 (incorporated by reference, see § 60.17) is the reference for design specifications, manufacturer's performance specifications, and test procedures. The opacity monitor manufacturer must periodically select and test an opacity monitor, that is representative of a group of monitors produced during a specified period or lot, for conformance with the design specifications in ASTM D6216–12. The opacity monitor manufacturer must test each opacity monitor for conformance with the manufacturer's performance specifications in ASTM D6216–12. Note: If the initial certification of the opacity monitor occurred before November 14, 2018 using D6216–98, D6216–03, or D6216–07, it is not necessary to recertify using D6216–12.

* * * * *

13.0 What Specifications Does a COMS Have to Meet for Certification?

A COMS must meet the following design, manufacturer's performance, and field audit performance specifications:

Note: If the initial certification of the opacity monitor occurred before November 14, 2018 using D6216–98, D6216–03, or D6216–07, it is not necessary to recertify using D6216–12.A. COMS must meet the following design, manufacturer's performance, and field audit performance specifications.

13.1 Design Specifications. The opacity monitoring equipment must comply with the design specifications of ASTM D6216–12.

13.2 Manufacturer's Performance Specifications. The opacity monitor must comply with the manufacturer's performance specifications of ASTM D6216–12.

* * * * *

16.0 * * *

8. ASTM D6216–12: Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications. ASTM. October 2012.

* * * * *

Performance Specification 2—Specifications and Test Procedures for SO_2 and NO_x Continuous Emission Monitoring Systems in Stationary Sources

* * * * *

13.2 Relative Accuracy Performance Specification.

	Calculate . . .	RA criteria (%)
If average emissions during the RATA are ≥50% of emission standard.	Use Eq. 2–6, with RM in the denominator	≤20.0
If average emissions during the RATA are <50% of emission standard.	Use Eq. 2–6, emission standard in the denominator	≤10.0
For SO_2 emission standards ≤130 but ≥86 ng/J (0.30 and 0.20 lb/million Btu).	Use Eq. 2–6, emission standard in the denominator	≤15.0
For SO_2 emission standards <86 ng/J (0.20 lb/million Btu)	Use Eq. 2–6, emission standard in the denominator	≤20.0

* * * * *

Performance Specification 3—Specifications and Test Procedures for O_2 and CO_2 Continuous Emission Monitoring Systems in Stationary Sources

* * * * *

12.0 Calculations and Data Analysis

Calculate the RA using equations 3–1 and 3–2. Summarize the results on a data sheet similar to that shown in Figure 2.2 of PS2.

$$RA = \frac{\left[\left|\bar{d}\right| + \left|CC\right|\right]}{\overline{RM}} \times 100 \qquad \text{Eq. 3-1}$$

Where:

$\left|\bar{d}\right|$ = Absolute value of the mean of the differences (from Equation 2-3 of Performance Specification 2).

|CC| = Absolute value of the confidence coefficient (from Equation 2-5 of Performance Specification 2).

$\overline{RM}$ = Average Reference Method Value

$$RA = \left|\overline{RM} - \overline{CEMS}\right| \qquad \text{Eq. } 3-2$$

$\overline{RM}$ = Average Reference Method Value

$\overline{CEMS}$ = Average CEMS Value

* * * * *

13.2 CEMS Relative Accuracy Performance Specification. The RA of the CEMS must be no greater than 20.0 percent of the mean value of the reference method (RM) data when calculated using equation 3–1. The results are also acceptable if the result of Equation 3–2 is less than or equal to 1.0 percent O_2 (or CO_2).

* * * * *

Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources

* * * * *

13.1 What is the 7-day drift check performance specification? Your daily PM CEMS internal drift checks must demonstrate that the daily drift of your PM CEMS does not deviate from the value of the reference light, optical filter, Beta attenuation signal, or other technology-suitable reference standard by more than 2 percent of the response range. If your CEMS includes diluent and/or auxiliary monitors (for temperature, pressure, and/or moisture) that are employed as a necessary part of this performance specification, you must determine the calibration drift separately for each ancillary monitor in terms of its respective output (see the appropriate performance specification for the diluent CEMS specification). None of the calibration drifts may exceed their individual specification.

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Performance Specification 15—Performance Specification for Extractive FTIR Continuous Emissions Monitor Systems in Stationary Sources

* * * * *

13.0 Method Performance [Reserved]

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Performance Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources

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11.8.7 The zero-level and mid-level CD for each day must be less than 5.0 percent of the span value as specified in section 13.2 of this PS. You must meet this criterion for 7 consecutive operating days.

* * * * *

17.0 * * *

TABLE 1—INTERFERENCE TEST GAS CONCENTRATIONS

Potential interferent gas [1]	Approximate concentration (balance N_2)
CO_2	15% ± 1% CO_2.[2]
CO	100 ± 20 ppm.
CH_2O	20 ± 5 ppm.
CH_4	100 ± 20 ppm.
NH_3	10 ± 5 ppm (extractive CEMS only).
NO	250 ± 50 ppm.
SO_2	200 ± 20 ppm.
O_2	3% ± 1% O_2.[2]
H_2O	10% ± 1% H_2O.[2]
N_2	Balance.[2]

[1] Any of these specific gases can be tested at a lower level if the manufacturer has provided reliable means for limiting or scrubbing that gas to a specified level in CEMS field installations.

[2] Gases for short path IP cell interference tests cannot be added above 100 percent stack equivalent concentration. Add these gases at the indicated percentages to make up the remaining cell volume.

* * * * *

PS–18 Appendix A Standard Addition Procedures

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12.0 [Reserved]

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■ 12. Revise sections 5.1.2(1) and (3) in Procedure 1 of appendix F to part 60 to read as follows:

Appendix F to Part 60—Quality Assurance Procedures

Procedure 1—Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used For Compliance Determination

* * * * *

5.1.2 * * *

(1) Challenge the CEMS (both pollutant and diluent portions of the CEMS, if applicable) with an audit gas of known concentration at two points within the following ranges:

Audit point	Audit range		
	Pollutant monitors	Diluent monitors for—	
		CO_2	O_2
1	20 to 30% of span value	5 to 8% by volume	4 to 6% by volume.
2	50 to 60% of span value	10 to 14% by volume	8 to 12% by volume.

Introduce each of the audit gases, three times each for a total of six challenges. Introduce the gases in such a manner that the entire CEMS is challenged. Do not introduce the same gas concentration twice in succession.

Use of separate audit gas cylinder for audit points 1 and 2. Do not dilute gas from audit cylinder when challenging the CEMS.

The monitor should be challenged at each audit point for a sufficient period of time to assure adsorption-desorption of the CEMS sample transport surfaces has stabilized.

* * * * *

(3) Use Certified Reference Materials (CRM's) (See Citation 1) audit gases that have been certified by comparison to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRM's) or EPA Protocol Gases following the most recent edition of the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (See Citation 2). Procedures for preparation of CRM's are described in Citation 1. Procedures for preparation of EPA Protocol Gases are described in Citation 2. In the case that a suitable audit gas level is not commercially available, Method 205 (See Citation 3) may be used to dilute CRM's or EPA Protocol Gases to the needed level. The difference between the actual concentration of the audit gas and the concentration indicated by the monitor is used to assess the accuracy of the CEMS.

* * * * *

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

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

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

■ 14. In § 63.7, revise paragraphs (g)(2) introductory text and (g)(2)(v) to read as follows:

§ 63.7 Performance testing requirements.

* * * * *

(g) * * *

(2) Contents of a performance test, CMS performance evaluation, or CMS quality assurance test report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard, test method, CMS performance specification, or quality assurance requirement for a CMS, or as otherwise approved by the Administrator in writing, the report shall include the elements identified in paragraphs (g)(2)(i) through (vi) of this section.

* * * * *

(v) Where a test method, CEMS, PEMS, or COMS performance specification, or on-going quality assurance requirement for a CEMS, PEMS, or COMS requires you record or report, the following shall be included in your report: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

* * * * *

■ 15. In § 63.8, revise paragraph (e)(5)(i) to read as follows:

§ 63.8 Monitoring requirements.

* * * * *

(e) * * *

(5) * * * (i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation containing the information specified in § 63.7(g)(2)(i) through (vi) simultaneously with the results of the performance test required under § 63.7 or within 60 days of completion of the performance evaluation, unless otherwise specified in a relevant standard.

* * * * *

■ 16. Revise Table 6 to Subpart DDDDD of part 63 to read as follows:

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements

for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant	You must	Using
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or EPA 1631 or EPA 1631E or ASTM D6323[a] (for solid), or EPA 821–R–01–013 (for liquid or solid), or ASTM D4177[a] (for liquid), or ASTM D4057[a] (for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples.	EPA SW–846–3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] (for biomass), or EPA 3050[a] (for solid fuel), or EPA 821–R–01–013[a] (for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type.	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type.	ASTM D3173[a], ASTM E871[a], or ASTM D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample.	ASTM D6722[a] (for coal), EPA SW–846–7471B[a] or EPA 1631 or EPA 1631E[a] (for solid samples), or EPA SW–846–7470A[a] or EPA SW–846–7471B[a] (for liquid samples), or EPA 821–R–01–013[a] (for liquid or solid), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content.	For fuel mixtures use Equation 8 in § 63.7530.
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples.	EPA SW–846–3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), or ASTM D5198[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type.	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), ASTM D5864[a], ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type.	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure chlorine concentration in fuel sample.	EPA SW–846–9250[a], ASTM D6721[a], ASTM D4208[a] (for coal), or EPA SW–846–5050[a] or ASTM E776[a] (for solid fuel), or EPA SW–846–9056[a] or SW–846–9076[a] (for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content.	For fuel mixtures use Equation 7 in § 63.7530 and convert from chlorine to HCl by multiplying by 1.028.
3. Mercury Fuel Specification for other gas 1 fuels.	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter, or.	Method 30B (M30B) at 40 CFR part 60, appendix A–8 of this chapter or ASTM D5954[a], ASTM D6350[a], ISO 6978–1:2003(E)[a], or ISO 6978–2:2003(E)[a], or EPA–1631[a] or equivalent.
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater.	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A–8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784[a] or equivalent.
4. TSM	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), or ASTM D4177[a], (for liquid fuels), or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples.	EPA SW–846–3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] or TAPPI T266[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type.	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type.	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample.	ASTM D3683[a], or ASTM D4606[a], or ASTM D6357[a] or EPA 200.8[a] or EPA SW–846–6020[a], or EPA SW–846–6020A[a], or EPA SW–846–6010C[a], EPA 7060[a] or EPA 7060A[a] (for arsenic only), or EPA SW–846–7740[a] (for selenium only).

To conduct a fuel analysis for the following pollutant	You must	Using
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content.	For fuel mixtures use Equation 9 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

* * * * *

■ 17. Revise Table 5 to Subpart UUUUU of part 63 to read as follows:

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 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]
1. Filterable Particulate matter (PM).	Emissions Testing	a. Select sampling ports location and the number of traverse points.	Method 1 at appendix A–1 to part 60 of this chapter.
		b. Determine velocity and volumetric flow rate of the stack gas.	Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter.
		c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B at appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.[3]
		d. Measure the moisture content of the stack gas.	Method 4 at appendix A–3 to part 60 of this chapter.
		e. Measure the filterable PM concentration	Methods 5 and 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 °C ±14 °C (320 °F ±25 °F).
		f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.	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.
		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	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)).
2. Total or individual non-Hg HAP metals.	Emissions Testing	a. Select sampling ports location and the number of traverse points.	Method 1 at appendix A–1 to part 60 of this chapter.
		b. Determine velocity and volumetric flow rate of the stack gas.	Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter.
		c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B at appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.[3]
		d. Measure the moisture content of the stack gas.	Method 4 at appendix A–3 to part 60 of this chapter.

[1] Regarding emissions data collected during periods of startup or shutdown, see §§ 63.10020(b) and (c) and 63.10021(h).

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]
		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.	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.
		f. Convert emissions concentrations (individual HAP metals, total filterable HAP metals, and total HAP metals) to lb/MMBtu or lb/MWh emissions rates.	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.	Method 1 at appendix A–1 to part 60 of this chapter.
		b. Determine velocity and volumetric flow rate of the stack gas.	Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter.
		c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B at appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981. [3]
		d. Measure the moisture content of the stack gas.	Method 4 at appendix A–3 to part 60 of this chapter.
		e. Measure the HCl and HF emissions concentrations.	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 D6348–03 [3] 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

3.c.1(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:

$$\text{Reported Result} = \frac{(\text{Measured Concentration in Stack})}{\%R} \times 100$$

and

To conduct a performance test for the following pollutant (cont'd)	Using (cont'd)	You must perform the following activities, as applicable to your input- or output-based emission limit (cont'd)	Using [2] (cont'd)
			(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.

To conduct a performance test for the following pollutant (cont'd)	Using (cont'd)	You must perform the following activities, as applicable to your input- or output-based emission limit (cont'd)	Using [2] (cont'd)
		f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.	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	
	HCl and/or HF CEMS.	a. Install, certify, operate, and maintain the HCl or HF CEMS.	Appendix B of this subpart.
		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	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)).
4. Mercury (Hg)	Emissions Testing	a. Select sampling ports location and the number of traverse points.	Method 1 at appendix A–1 to part 60 of this chapter or Method 30B at Appendix A–8 for Method 30B point selection.
		b. Determine velocity and volumetric flow rate of the stack gas.	Method 2, 2A, 2C, 2F, 2G or 2H at appendix A–1 or A–2 to part 60 of this chapter.
		c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B at appendix A–1 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981.[3]
		d. Measure the moisture content of the stack gas.	Method 4 at appendix A–3 to part 60 of this chapter.
		e. Measure the Hg emission concentration	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.
		f. Convert emissions concentration to lb/TBtu or lb/GWh emission rates.	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	
	Hg CEMS	a. Install, certify, operate, and maintain the CEMS.	Sections 3.2.1 and 5.1 of appendix A of this subpart.
		b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates.	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.
		b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d).
		c. Convert emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates.	Section 6 of appendix A to this subpart.
	OR	OR	
	LEE testing	a. Select sampling ports location and the number of traverse points.	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.
		b. Determine velocity and volumetric flow rate of the stack gas.	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.
		c. Determine oxygen and carbon dioxide concentrations of the stack gas.	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.

To conduct a performance test for the following pollutant ... (cont'd)	Using ... (cont'd)	You must perform the following activities, as applicable to your input- or output-based emission limit ... (cont'd)	Using [2] (cont'd)
		d. Measure the moisture content of the stack gas.	Method 4 at appendix A–3 to part 60 of this chapter, or moisture monitoring systems certified according to part 75 of this chapter.
		e. Measure the Hg emission concentration	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.e.*, per pair of sorbent traps) or sorbent trap monitoring system or Hg CEMS certified per appendix A of this subpart.
		f. Convert emissions concentrations from the LEE test to lb/TBtu or lb/GWh emissions rates.	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)).
		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.	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.	Part 75 of this chapter and § 63.10010(a) and (f).
		b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.	Part 75 of this chapter and § 63.10010(a), (b), (c), and (d).
		c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	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)).

■ 18. In appendix A to Part 63:

■ a. Revise section 12.4 in Method 303.

■ b. Revise section 2.0 in Method 308.

■ c. Remove and reserve section 7.2.2 in Method 308.

■ d. Revise sections 7.2.3.3, 8.1.2, 9.1, 11.3.2, and 12.1 in Method 308.

■ e. Add sections 12.5 and 13.0 in Method 308.

■ f. Revise sections 8.2.2.4 and 9.2.3 in Method 320.

■ g. Revise section 12.9 in Method 323.

■ h. Revise section 8.2.1.3, Figure 8.1, and section 8.2.3.2 in Method 325A.

■ i. Add sections 8.2.3.3 and 8.4.3 in Method 325A.

■ j. Revise sections 9.3.2, 9.13, 11.3.2.5, and 12.2.2 in Method 325B.

■ k. Remove sections 12.2.3 and 12.2.4 in Method 325B.

■ l. Revise table 17.1 in Method 325B.

The revisions and additions read as follows:

Appendix A to Part 63—Test Methods

* * * * *

Method 303—Determination of Visible Emissions From By-Product Coke Oven Batteries

* * * * *

12.4 Average Duration of VE from Charging Operations. Use Equation 303–3 to calculate the daily 30-day rolling log average of seconds of visible emissions from the charging operation for each battery using these current day's observations and the 29 previous valid daily sets of observations.

$$\text{logarithmic average} = e^{y} - 1 \qquad \text{(Eq. 303-3)}$$

$$\text{where } y = \frac{\ln(X_1 + 1) + \ln(X_2 + 1) + \ldots \ln(X_i + 1)}{A}$$

* * * * *

Method 308—Procedure for Determination of Methanol Emission From Stationary Sources

* * * * *

2.0 *Summary of Method.*

A gas sample is extracted from the sampling point in the stack. The methanol is collected in deionized distilled water and adsorbed on silica gel. The sample is returned to the laboratory where the methanol in the water fraction is separated from other organic compounds with a gas chromatograph (GC) and is then measured by a flame ionization detector (FID). The fraction adsorbed on silica gel is extracted with deionized distilled water and is then separated and measured by GC/FID.

* * * * *

7.2.2 [Reserved]

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7.2.3.3 Methanol Standards for Adsorbent Tube Samples. Prepare a series of methanol standards by first pipetting 10 ml of the methanol working standard into a 100-ml volumetric flask and diluting the contents to exactly 100 ml with deionized distilled water. This standard will contain 10 µg/ml of methanol. Pipette 5, 15, and 25 ml of this

[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.

standard, respectively, into three 50-ml volumetric flasks. Dilute each solution to 50 ml with deionized distilled water. These standards will have 1, 3, and 5 µg/ml of methanol, respectively. Transfer all four standards into 40-ml glass vials capped with Teflon®-lined septa and store under refrigeration. Discard any excess solution.

* * * * *

8.1.2 Leak Check. A leak check before and after the sampling run is mandatory. The leak-check procedure is as follows:

Temporarily attach a suitable (*e.g.*, 0- to 40-ml/min) rotameter to the outlet of the DGM, and place a vacuum gauge at or near the probe inlet. Plug the probe inlet, pull a vacuum of at least 250 mm (10 inch) Hg or the highest vacuum experienced during the sampling run, and note the flow rate as indicated by the rotameter. A leakage rate in excess of 2 percent of the average sampling rate is acceptable.

Note: Carefully release the probe inlet plug before turning off the pump.

* * * * *

9.1 Miscellaneous Quality Control Measures. The following quality control measures are required:

Section	Quality control measure	Effect
8.1.2, 8.1.3, 10.1	Sampling equipment leak check and calibration	Ensures accurate measurement of sample volume.
10.2	GC calibration	Ensures precision of GC analysis.
13.0	Methanol spike recovery check	Verifies all methanol in stack gas is being captured in impinge/adsorbent tube setup.

* * * * *

11.3.2 Desorption of Samples. Add 3 ml of deionized distilled water to each of the stoppered vials and shake or vibrate the vials for 30 minutes.

* * * * *

12.1 Nomenclature.

C_{ar} = Concentration of methanol in the front of the adsorbent tube, µg/ml.

C_{ab} = Concentration of methanol in the back of the adsorbent tube, µg/ml.

C_I = Concentration of methanol in the impinger portion of the sample train, µg/ml.

E = Mass emission rate of methanol, µg/hr (lb/hr).

m_a = Total mass of compound measured in impinger and on adsorbent with spiked train (mg).

m_u = Total mass of compound measured in impinger and on adsorbent with unspiked train (mg).

m_v = Mass per volume of spiked compound measured (mg/L).

M_{tot} = Total mass of methanol collected in the sample train, µg.

P_{bar} = Barometric pressure at the exit orifice of the DGM, mm Hg (in. Hg).

P_{std} = Standard absolute pressure, 760 mm Hg (29.92 in. Hg).

Q_{std} = Dry volumetric stack gas flow rate corrected to standard conditions, dscm/hr (dscf/hr).

R = fraction of spiked compound recovered.

s = theoretical concentration (ppm) of spiked target compound.

T_m = Average DGM absolute temperature, degrees K (°R).

T_{std} = Standard absolute temperature, 293 degrees K (528 °R).

V_{ar} = Volume of front half adsorbent sample, ml.

V_{ab} = Volume of back half adsorbent sample, ml.

V_I = Volume of impinger sample, ml.

V_m = Dry gas volume as measured by the DGM, dry cubic meters (dcm), dry cubic feet (dcf).

$V_{m(std)}$ = Dry gas volume measured by the DGM, corrected to standard conditions, dry standard cubic meters (dscm), dry standard cubic feet (dscf).

* * * * *

12.5 Recovery Fraction (R).

$$m_v = \frac{m_s}{V_s} - \frac{m_u}{V_u} \qquad \text{Equation 308-4}$$

$$R = \frac{m_v \, x \, v_s}{s} \qquad \text{Equation 308-5}$$

13.0 Method Performance.

Since a potential sample may contain a variety of compounds from various sources, a specific precision limit for the analysis of field samples is impractical. Precision in the range of 5 to 10 percent relative standard deviation (RSD) is typical for gas chromatographic techniques, but an experienced GC operator with a reliable instrument can readily achieve 5 percent RSD. For this method, the following combined GC/operator values are required.

(a) Precision. Calibration standards must meet the requirements in section 10.2.1 or 10.2.2 as applicable.

(b) Recovery. After developing an appropriate sampling and analytical system for the pollutants of interest, conduct the following spike recovery procedure at each sampling point where the method is being applied.

i. Methanol Spike. Set up two identical sampling trains. Collocate the two sampling probes in the stack. The probes shall be placed in the same horizontal plane, where the first probe tip is 2.5 cm from the outside edge of the other. One of the sampling trains shall be designated the spiked train and the other the unspiked train. Spike methanol into the impinger, and onto the adsorbent tube in the spiked train prior to sampling. The total mass of methanol shall be 40 to 60 percent of the mass expected to be collected with the unspiked train. Sample the stack gas into the two trains simultaneously. Analyze the impingers and adsorbents from the two trains utilizing identical analytical procedures and instrumentation. Determine the fraction of spiked methanol recovered (R) by combining the amount recovered in the impinger and in the adsorbent tube, using the equations in section 12.5. Recovery values must fall in the range: $0.70 \leq R \leq 1.30$. Report the R value in the test report.

ii. [Reserved]

* * * * *

Method 320—Measurement of Vapor Phase Organic and Inorganic Emissions By Extractive Fourier Transform Infrared (FTIR) Spectroscopy

* * * * *

8.2.2.4 Determine the percent leak volume $\%V_L$ for the signal integration time t_{ss} and for ΔP_{max}, *i.e.*, the larger of ΔP_v or ΔP_p, as follows:

$$\%V_L = 50 t_{ss} \frac{\Delta P_{max}}{P_s} \qquad (2)$$

Where:

50 = 100% divided by the leak check time of 2 minutes.

* * * * *

9.2.3 Calculate the dilution ratio using the tracer gas as follows:

$$DF = \frac{SF_{6(spk)}}{SF_{6(dir)}} \quad (3)$$

Where:

$$CS = DF * Spike_{dir} + Unspike\ (1 - DF) \quad (4)$$

DF = Dilution factor of the spike gas; this value shall be ≥10.

$SF_{6(dir)}$ = SF_6 (or tracer gas) concentration measured directly in undiluted spike gas.

$SF_{6(spk)}$ = Diluted SF_6 (or tracer gas) concentration measured in a spiked sample.

$Spike_{dir}$ = Concentration of the analyte in the spike standard measured by filling the FTIR cell directly.

CS = Expected concentration of the spiked samples.

Unspike = Native concentration of analytes in unspiked samples.

* * * * *

Method 323—Measurment of Formaldehyde Emissions From Natural Gas-Fired Stationary Sources-Acetyl Acetone Derivitization Method

* * * * *

12.9 Formaldehyde Concentration Corrected to 15% Oxygen

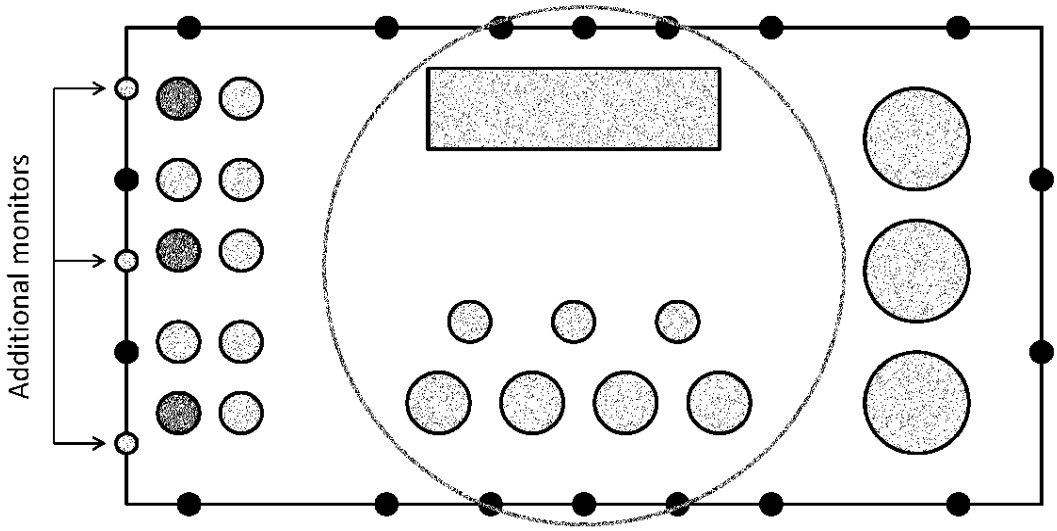
* * * * *

$$C_{form@15\%O_2} = C_{form}\ \frac{(20.9-15)}{(20.9-O_{2d})} \quad \text{Eq. 323-8}$$

Method 325A—Volatile Organic Compounds From Fugitive and Area Sources: Sampler Deployment and VOC Sample Collection

* * * * *

8.2.1.3 An extra sampler must be placed near known sources of VOCs if potential emission sources are within 50 meters (162 feet) of the boundary and the source or sources are located between two monitors. Measure the distance (x) between the two monitors and place another monitor approximately halfway between (x/2 ±10 percent) the two monitors. Only one extra sampler is required between two monitors to account for known sources of VOCs. For example, in Figure 8.1, the facility added three additional monitors (*i.e.*, light shaded sampler locations), and in Figure 8.2, the facility added two additional monitors to provide sufficient coverage of all area sources.



Refinery (20° Angle)

Note: Shaded sources are within 50 meters of the property boundary and are located between two monitors. Additional coverage required by this method was accomplished by placing the monitors halfway between two existing monitors.

Figure 8.1: Facility with a Regular Shape Between 750 and 1,500 Acres in Area

* * * * *

8.2.3.2 For facilities with a monitoring perimeter length greater than or equal to 7,315 meters (24,000 feet), sampling locations are spaced 610 ± 76 meters (2,000 ± 250 feet) apart.

8.2.3.3 Unless otherwise specified in an applicable regulation, permit or other requirement, for small disconnected subareas with known sources within 50 meters (162 feet) of the monitoring perimeter, sampling points need not be placed closer than 152 meters (500 feet) apart as long as a minimum of 3 monitoring locations are used for each subarea.

* * * * *

8.4.3 When extenuating circumstances do not permit safe deployment or retrieval of passive samplers (e.g., extreme weather, power failure), sampler placement or retrieval earlier or later than the prescribed schedule is allowed but must occur as soon as safe access to sampling sites is possible.

* * * * *

Method 325B—Volatile Organic Compounds From Fugitive and Area Sources: Sampler Preparation and Analysis

* * * * *

9.3.2 Field blanks must be shipped to the monitoring site with the sampling tubes and must be stored at the sampling location throughout the monitoring exercise. The field blanks must be installed under a protective hood/cover at the sampling location, but the long-term storage caps must remain in place throughout the monitoring period (see Method 325A). The field blanks are then shipped back to the laboratory in the same container as the sampled tubes. Collect at least two field blank samples per sampling period to ensure sample integrity associated with shipment, collection, and storage.

* * * * *

9.13 Routine CCV at the Start of a Sequence. Run CCV before each sequence of analyses and after every tenth sample to ensure that the previous multi-level calibration (see section 10.0) is still valid.

* * * * *

11.3.2.5 Whenever the thermal desorption—GC/MS analytical method is changed or major equipment maintenance is performed, you must conduct a new five-level calibration (see section 10.0). System calibration remains valid as long as results from subsequent CCV are within 30 percent of the most recent 5-point calibration (see section 9.13). Include relevant CCV data in the supporting information in the data report for each set of samples.

* * * * *

12.2.2 Determine the equivalent concentrations of compounds in atmospheres as follows. Correct target compound concentrations determined at the sampling site temperature and atmospheric pressure to standard conditions (25 °C and 760 mm mercury) using Equation 12.5.

$$C_c = \frac{(m_{meas}) * 10^6}{U_{NTP} * \left[\frac{t_{SS}}{298.15}\right]^{\frac{1}{2}} * t} \qquad \text{Eq. 12.5}$$

Where:

m_{meas} = The mass of the compound as measured in the sorbent tube (µg).

t = The exposure time (minutes).

t_{ss} = The average temperature during the collection period at the sampling site (K).

U_{NTP} = The method defined diffusive uptake rate (sampling rate) (mL/min).

Note: Diffusive uptake rates (U_{NTP}) for common VOCs, using carbon sorbents packed into sorbent tubes of the dimensions specified in section 6.1, are listed in Table 12.1. Adjust analytical conditions to keep expected sampled masses within range (see sections 11.3.1.3 to 11.3.1.5). Best possible method detection limits are typically in the order of 0.1 ppb for 1,3-butadiene and 0.05 ppb for volatile aromatics such as benzene for 14-day monitoring. However, actual detection limits will depend upon the analytical conditions selected.

* * * * *

TABLE 17.1—SUMMARY OF GC/MS ANALYSIS QUALITY CONTROL PROCEDURES

Parameter	Frequency	Acceptance criteria	Corrective action
Bromofluorobenzene Instrument Tune Performance Check.	Daily [a] prior to sample analysis	Evaluation criteria presented in Section 9.5 and Table 9.2.	(1) Retune and or (2) Perform Maintenance.
Five point calibration bracketing the expected sample concentration.	Following any major change, repair or maintenance or if daily CCV does not meet method requirements. Recalibration not to exceed three months.	(1) Percent Deviation (%DEV) of response factors ≤30%. (2) Relative Retention Times (RRTs) for target peaks ±0.06 units from mean RRT.	(1) Repeat calibration sample analysis. (2) Repeat linearity check. (3) Prepare new calibration standards as necessary and repeat analysis.
Calibration Verification (CCV Second source calibration verification check).	Following the calibration curve	The response factor ±30% DEV from calibration curve average response factor.	(1) Repeat calibration check. (2) Repeat calibration curve.
Laboratory Blank Analysis	Daily [a] following bromofluoro benzene and calibration check; prior to sample analysis.	(1) ≤0.2 ppbv per analyte or ≤3 times the LOD, whichever is greater. (2) Internal Standard (IS) area response ±40% and IS Retention Time (RT) ±0.33 min. of most recent calibration check.	(1) Repeat analysis with new blank tube. (2) Check system for leaks, contamination. (3) Analyze additional blank.
Blank Sorbent Tube Certification	One tube analyzed for each batch of tubes cleaned or 10 percent of tubes whichever is greater.	<0.2 ppbv per VOC targeted compound or 3 times the LOD, whichever is greater.	Re-clean all tubes in batch and reanalyze.
Samples—Internal Standards	All samples	IS area response ±40% and IS RT ±0.33 min. of most recent calibration validation.	Flag Data for possible invalidation.

TABLE 17.1—SUMMARY OF GC/MS ANALYSIS QUALITY CONTROL PROCEDURES—Continued

Parameter	Frequency	Acceptance criteria	Corrective action
Field Blanks	Two per sampling period	No greater than one-third of the measured target analyte or compliance limit.	Flag Data for possible invalidation due to high blank bias.

[a] Every 24 hours.

* * * * *

[FR Doc. 2018–24747 Filed 11–13–18; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2018–0222; FRL–9986–31–Region 9]

Approval of Arizona Air Plan; Hayden Lead Nonattainment Area Plan for the 2008 Lead Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a state implementation plan (SIP) revision submitted by the State of Arizona to meet Clean Air Act (CAA or ''Act'') requirements applicable to the Hayden lead nonattainment area (''Hayden Lead NAA''). The EPA is approving the base year emissions inventory, the attainment demonstration, the control strategy, including reasonably available control technology and reasonably available control measures demonstrations, the reasonable further progress demonstration, and the contingency measure as meeting the requirements of the CAA and the EPA's implementing regulations for the 2008 lead national ambient air quality standard (NAAQS). We also find that the State has demonstrated that the Arizona SIP meets the new source review (NSR) requirements of CAA section 172(c)(5) for the Hayden Lead NAA.

DATES: This final rule is effective on December 14, 2018.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–R09–OAR–2018–0222. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through *https://www.regulations.gov,* or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Ginger Vagenas, EPA Region IX, 415–972–3964, *Vagenas.Ginger@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, the terms ''we,'' ''us,'' and ''our'' mean the EPA.

Table of Contents

I. Background

Lead is generally emitted in the form of particles that are deposited in water, soil, and dust. People may be exposed to lead by inhaling it or by ingesting lead-contaminated food, water, soil, or dust. Once in the body, lead is quickly absorbed into the bloodstream and can result in a broad range of adverse health effects including damage to the central nervous system, cardiovascular function, kidneys, immune system, and red blood cells. Children are particularly vulnerable to lead exposure, in part because they are more likely to ingest lead and in part because their still-developing bodies are more sensitive to the effects of lead. The harmful effects to children's developing nervous systems (including their brains) arising from lead exposure may include IQ [1] loss, poor academic achievement, long-term learning disabilities, and an increased risk of delinquent behavior.

The EPA first established a lead standard in 1978 at 1.5 micrograms per meter cubed ($\mu g/m^3$) as a quarterly average.[2] Based on new health and scientific data, the EPA revised the federal lead standard to 0.15 $\mu g/m^3$ and revised the averaging time for the standard on October 15, 2008.[3] A violation of the standard occurs when ambient lead concentrations exceed 0.15 $\mu g/m^3$ averaged over a 3-month rolling period.

Following the promulgation of a new or revised NAAQS, the EPA is required by the CAA to designate areas throughout the United States as attaining or not attaining the NAAQS. This process is set forth in section 107(d)(1) of the Act. After initially being designated unclassifiable due to insufficient monitoring data, the Hayden area was redesignated nonattainment on September 3, 2014, effective October 3, 2014.[4][5] The designation of the Hayden area as nonattainment for the 2008 lead NAAQS triggered requirements under section 191(a) of the CAA requiring Arizona to submit a SIP revision with a plan to attain the standard as expeditiously as practicable, but no later than October 3, 2019.

The Arizona Department of Environmental Quality (ADEQ) is the air quality agency that develops SIP revisions for the Hayden area. The SIP revision for the Hayden Lead NAA, entitled ''SIP Revision: Hayden Lead Nonattainment Area'' (''2017 Hayden Lead Plan'' or ''Plan'') was adopted by ADEQ on March 3, 2017, and submitted to the EPA on the same day.[6] The Plan includes a 2012 base year emissions inventory, a demonstration that controls required under the Plan are sufficient to bring the area into attainment of the 2008 lead NAAQS, an analysis that demonstrates reasonably available control measures/reasonably available control technology (RACM/RACT) levels of control are required to be implemented, a demonstration that the Plan provides for reasonable further progress (RFP) towards attainment, and a contingency measure that will be implemented if the area fails to make

[1] IQ (intelligence quotient) is a score created by dividing a person's mental age score, obtained by administering an intelligence test, by the person's chronological age, both expressed in terms of years and months. ''Glossary of Important Assessment and Measurement Terms,'' Philadelphia, PA: National Council on Measurement in Education. 2016.

[2] 43 FR 46246 (October 5, 1978).

[3] 73 FR 66964 (November 12, 2008) (''lead NAAQS rule'').

[4] 79 FR 52205.

[5] For an exact description of the Hayden Lead NAA, see 40 CFR 81.303.

[6] Letter dated March 3, 2017, from Timothy S. Franquist, Director, Air Quality Division, ADEQ, to Alexis Strauss, Acting Regional Administrator, EPA Region IX.